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Xmas Set Slot Cars**

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model car *Science*

FEBRUARY 1966

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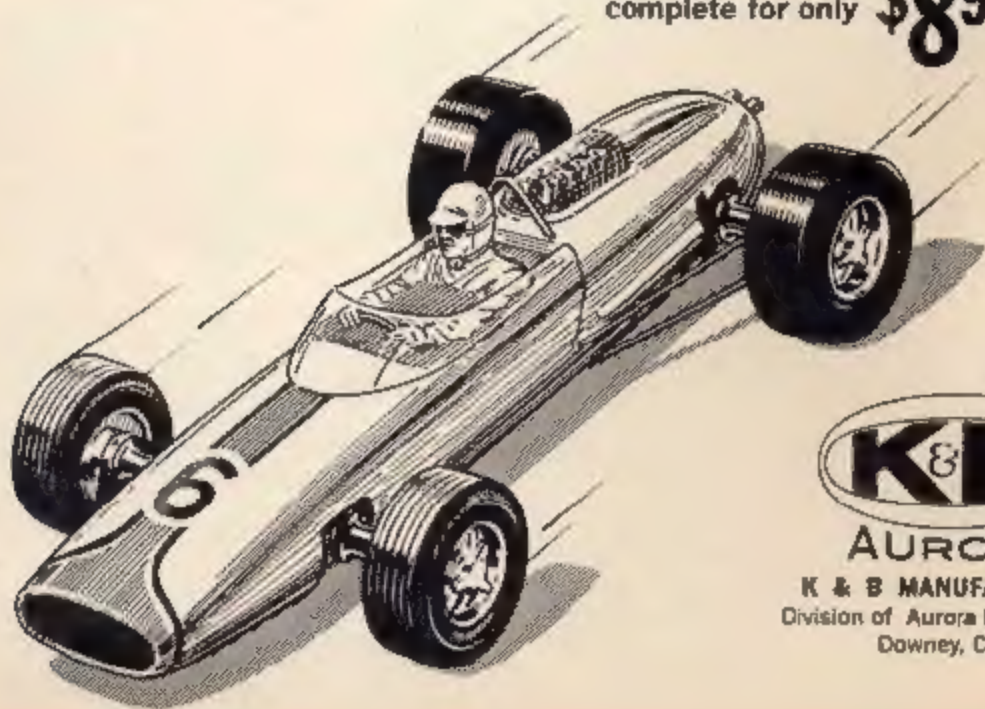
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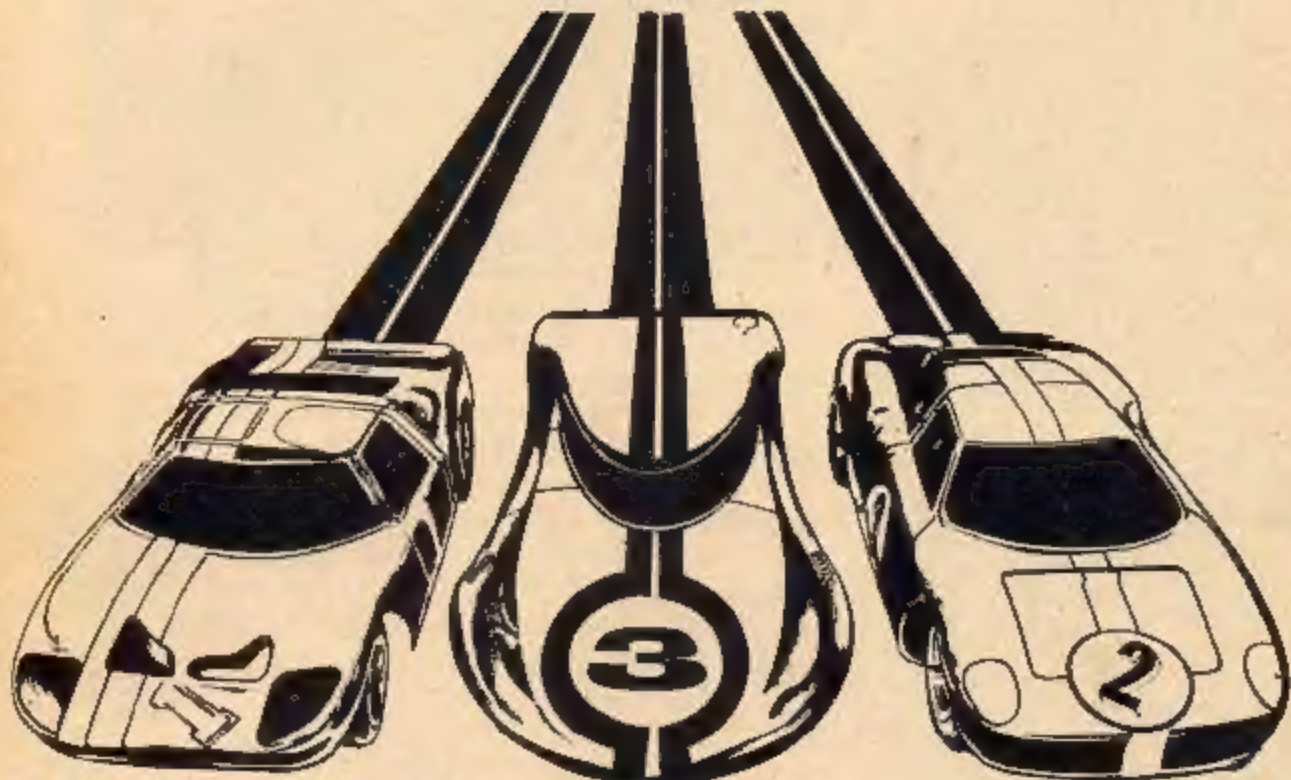
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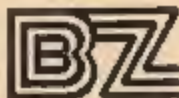
2 NEW BZ SHELBY FORD GT'S—Both are 1/24 scale replicas of the famous speed demon. One is painted a sizzling red with blue-and-white stripes; the other is dazzling white, with red-and-blue stripes, and black-slotted wheels with 3-prong polished chrome knock-off hubs.

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NEW BZ HAND-CONTROLLER—Revolutionary new features include a cloth liner between shell and plunger to dissipate heat. Bakelite pistol grip design fits all sizes of hands, children and adults. All moving parts utilize metal bushings. 25 ohm controller with replaceable 15 ohm resistor cartridge available. Complete, assembled, ready-to-use including three alligator clips. about—\$6.95



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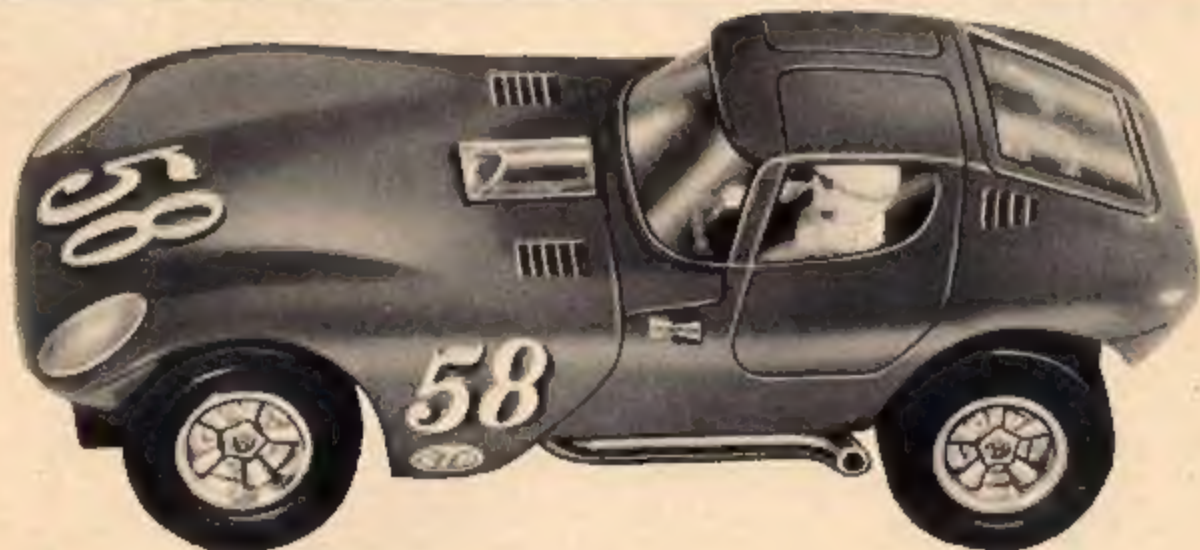
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ON THE COVER — Good tools and the know-how of using them just has to make a guy a better builder. But where do you start to stock a workbench? The answer is simple. Start small, then let your know-how and your check book take it from there. For what to look for, we've got all the info you'll need starting on page 18. Phil "I-am-a-camera" Glickman took the photo.

Strombecker Raceways 1/32-scale

CHEETAH GT

Professional Championship Series—



Exclusive TC-32 12V
Competition Motor
with Easily Replaceable
Brushes
(Pat. Applied For)

High Impact
Plastic Body

Metal Crown Gear



Metal Pinion

New Pan Type
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No Lubricant Necessary
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created by Bill Thomas and re-created in exacting
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It's a Chevy-inspired instrument of speed and dependability!

It's a 327 cu. in. Sting-Ray modified engine!

It's a gull-wing entry and exit!

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advanced high torque TC-32 12-volt motor with easily replaced,
spring loaded, screw fastened brushes, and chrome-plated
brass crown gear and steel pinion gear. This car looks like the
sleek champion it emulates; performs—or rather outperforms
—model cars in its class by actual racing tests!

Complete with 2-piece, pan-type, all-brass adjustable chassis
that can actually be adjusted while mounted in body. The
Delrin slot guide has brushes that can be replaced without re-
moving the entire guide from the chassis. Authentic tires hug
wide rear wheels for better traction. Complete with injection-
molded, high-impact, unbreakable body, the Cheetah is des-
tined to walk away with top honors, on commercial tracks coast
to coast. Retail, in kit form, \$5.95 at hobby stores and hobby
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MODEL MAIL

LANE SPACING

What should the correct spacing be between slots for a 1/24 scale track? Also, can a wood burning pencil be used to cut the slots? If not, what will work?

Warren Hallman
Gastonia, N. C.

We would recommend at least 3-1/2" and preferably 3-3/4" between slots, Warren. The wood burning pencil will not work satisfactorily. You'll have good luck using a rented router and a 1/8" straight faced router bit. Remember, however, if you intend to use braid for a conductor, it must be recessed into the track on both sides of the slot. An end mill, inserted in the router collet, will do the job. Make certain you keep the router firmly clamped to a trammel point during all routing operations. We'll try to get an article on this very soon.

WANTS BASIC SLOT RACING INFORMATION

I have recently become addicted to slot car racing. (It's very contagious — Ed) Although I haven't been racing long, I have noticed that the cars that come with the complete racing sets usually begin to act erratic after only a few hours of running. Are these cars of poorer quality than the separate kits or built up models on the market?

John Conreid
San Francisco, Calif.

The cars are not necessarily of poorer quality, John, although most cars that come in a complete racing set must be built to a certain price to keep the cost of the entire set down. A separate kit or built up usually does have slightly better gears and bearings, but not always! However, I am quite sure that this is the real reason the "set" cars go to pieces faster than any others — lack of any maintenance! Think a minute. The new set is snapped together feverishly, Aunt

Agatha and Uncle Joe drop in, the kids gather around, and the bash is on! The cars are hurtled to the floor by inexperienced new drivers, run for hours on end with absolutely no lubrication, shoved backwards on the track when they refuse to run, etc. It's really a miracle they last as long as they do!

WHAT'S HAPPENING?

What in the world is happening to slot racing? I've been distracted from the sport for only a few months, due to business commitments. Now that I'm back in the game, I find cars selling for \$12, \$14, even \$18 and \$20 each! What ever happened to the good old \$5.95 car?

Eric Strandsdale
Birmingham, Ala.

The trend lately has been toward "builtups", Eric. These cars naturally cost more but many racing fans evidently think they're worth the money, judging from the rate the cars disappear from the hobby shop shelves. The \$5.95 car is still here however, and in abundance too! Witness the 1/32 line from Monogram, Revell, et al. Cars seem to be improving constantly, yet the price tag remains the same. A bit of alright I'd say!

MAN, I'M MAD!

Boy, that really tears it! In the November issue I ran across a letter from Rick Weinerman of Detroit, Michigan. He said Roth was a fink, and in my book that's going too far! Roth is now, and always will be, the coolest Kustom Kat that ever put four wheels together. Put that in Rick's pipe and make him smoke it!

I'm putting a Lil' Coffin together for a local contest. I am using Metalflake Lemon and Lime over the original candy Burgundy. Would this give me any special problem? Thanks a mess man!

Tom Sawyer
Auburn, Maine

With a name like Tom Sawyer, can we take you for serious? For those lovely accolades we will ask Big Daddy if he'll send you two thin chin whiskers for next Christmas. As far as the paint combination goes, you shouldn't have any problems if your stomach can take it. Sounds real boss to me, baby!

continued on page 10

MODEL PRODUCTS PRESENTS



STOP READING RIGHT NOW! Don't waste another second here if what you're looking for is the same old jazz in your kits! Sorry, big dad, but Model Products just doesn't swing that way. There's a sign in the dungeon where we keep our engineers that says: "If it's not different and exciting, don't waste your

1 '66 PONTIAC GTO—King of the road . . . the wild GTO TIGER. In a kit that's bursting at the seams. Stock, custom, competition? Of course! But hold, tiger tamer, that's just the start. This cat goes the match car route, too! Driver in the rear and the big mill in the front seat area with a 6-71, blower scoop through the windshield, headers, the works! Now the bomb! Kit includes a bonus slot racing pack (driver, tonneau and attachments) so you can use the GTO as a slot racing body. Instant fit on Dyn-O's and adaptable to most other racers. GTO . . . kit of the year! \$2.00

2 '66 PONTIAC BONNEVILLE HT—Another MPC tiger . . . because MPC is the only officially authorized maker of Pontiac model cars! Just look at the ways you can go! Match car . . . with 500 HP engine behind the driver! Slot racing . . . with the bonus slot racing pack (driver, tonneau, and attachments). Custom . . . with Dean Jeffries providing the design. Competition and stock versions AND (look out!) secret agent car! With a rocket-launcher, machine guns, jab-ram, side-body blades, seat armor . . . the Bonneville is a spy-guy bomb! For '66 build the Bonneville! \$2.00

3 '66 DODGE MONACO 500—Here's the top of the Dodge line, the sleek 2+2 HT that Budd Anderson has turned into a car no secret agent would be without! The man from M.P.C. gives you rockets at the rear, machine guns under the hood, cutters at the hubs, rifles . . . yes, even a derby hat and gold brick! And world-famous Dean Jeffries designed the custom for best-of-show with custom buckets, roll pans, wheels, lakes pipes, wood grain body decal, and plenty more! For competition, there's a full power pack. For stock, there's detail and authenticity only MPC can achieve! \$1.49

4 '66 CORVETTE STING RAY—Let's start with the new low, low price of this hottest 'Vette ever. \$1.39! Never before such a great kit at such a going price! And you can build it as either a 327 or 427! It's got the standard and special custom hood, plus . . . a 6-71 blower, 4-barrel and Corvette fuel injection, custom exhaust headers, slicks, roll bar, mag wheels! Add to this the independent front suspension that really works, one-piece body, steerable front wheels, detailed rear suspension, and a barrel of chrome parts! It's MPC for Drag City '66! All this for only \$1.39!



MPC MODEL PRODUCTS CORPORATION

MOUNT CLEMENS, MICHIGAN

HOW'S YOUR GANGBUSTERS COLLECTION? Gangbusters . . . the red hot series that offers a get-away, police pursuit and classic car version in every kit! Look for them: '27 Lincoln Roadster, '28 Lincoln Sport Touring, '32 Chrysler Sedan and '32 Chevrolet Cabriolet/Panell

EIGHT NEW MASTER KITS

time and our customers' money!" So if it's Dullsville you're looking for, look to someone else. But if you're a goer, a builder who wants to build and not fiddle, a more-for-your-money man, a guy who must have a kit that runneth over, then cool it right here with the fastest growing kit in the industry.

Budd Anderson "

5 '56/'57 CORVETTE—Here's the kit you've been waiting for... Budd Anderson's favorite... with eight (repeat: eight!) possible ways to build! '56 or '57 stock, modified sports drag, Bonneville racer, custom, road racer, rally car, or stock drag. Three engine options (blower, dual 4-barrel, one 4-barrel)! Steerable front wheels! Three wheel options! A power pack for every racing version! Working suspension! One-piece body! Driver figure. Simplified construction. It's a fantastic kit! Never before available! Loaded as only Model Products knows how to load a kit! \$2.00

6 '32 CHEVY ROADSTER—Here's the rod to end all rods! With rear slicks, V-8 engine, two 4-barrel carbs, and custom interior, it goes the street romping route! Take off the top and hood, throw on the roll bar, add the super-charger with top-mounted injector and it's a galloping B/Gasser. Play it stock with a detailed 6-cylinder engine, chrome hood louvers, tandem irons, wire wheels, white walls, luggage rack... and it's a magnificent classic. Two engines, one-piece body, working rumble seat, top and boot... everything you could ask for! Go rodding... at a low price! \$1.49

7 '33 CHEVY PANEL—Budd Anderson's got the works in this one! Go-power parts that won't stop! It can travel as a V-8 powered street hauler or be a blown and injected competition model! Or classic collectors can make it stock! Here's authenticity only MPC can put in a kit! Opening rear doors, steerable front wheels, custom seats, and the original highly-detailed 6-cylinder engine. Chrome? This model's brilliant with chrome! Chrome wheels, grille, headlights, hood louvers, windshield frame, engine parts, and horns. Its another MPC winner! Rod it the panel route! \$1.49

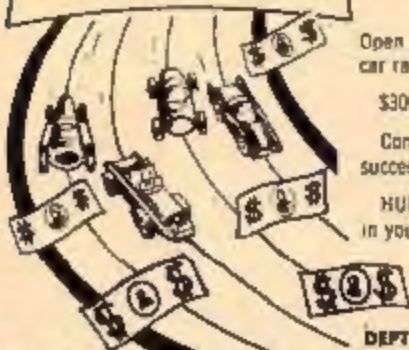
8 '32 CHRYSLER ROADSTER—One of the top ten all-time American classics! Designed by Le Baron to beat the best of its time. And it did! And in the MPC tradition, this kit's got more to offer. Steerable front wheels, working rumble seat, top and boot, golf equipment compartment with working door, 8-cylinder motor loaded with chrome! But there's more! It can be built as a get-away or police car with bullet-riddled windshield and radiator, 2 gangster figures, siren and complete arsenal. Still more! An 18-piece police motorcycle! To say the least, it's loaded! \$2.00



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- MDC gears also get longest possible life from pinion gears.
- MDC gears are available in a wide selection of ratios for any speed motor. MDC Standard Crown Gears with 24, 28, 30, 32, 34, 36, 40 and 45 teeth; Hypoid Crown gears (for lower center of gravity) with 30, 32 and 36 teeth.



ALL OF THIS—FOR ONLY 29¢!

Next time, don't just ask your dealer for MDC gears... insist on them! Send 10¢ for literature on full line of MDC products.



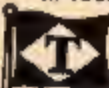
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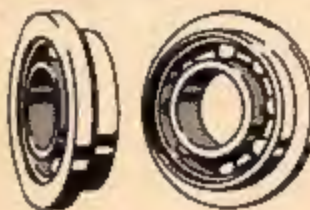
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SLOT CAR RACING IS:

INTERNATIONAL

continued from page 6

A HOME MADE CONTROLLER?

Could you people give me some advice or plans or something like that, that would tell me how to build a homemade controller? By the time I have to lay out the money for a controller, I won't have any left for a car. You've got a great mag!

George Davison
La Porte, Texas

That last line convinced us, George! You're all GOOD! But... you've got a problem. By the time you spend the necessary bucks to buy parts, we're afraid you'll have nearly as much invested in a home made controller as you would one of the \$2.98 Atlas or MRRC units. However, anything for a reader. We'll commission our ex-midwest rickety roadrunner, Ray Hoy, the toy boy, to see what he can dig up out of his monstrous box of mangled Mickey Mouse watch parts. If he can get something working, we'll run it real soon.

ANOTHER HOME TRACK FAN

I am planning to build a home made 1/32 scale track, with four lanes. What type and thickness of wood should I use for the track surface? I have had no experience whatsoever with home track building. Also, what type of electrical tape should I use? I would appreciate any help you could give me.

Kim Anderson
Toronto, Canada

You've come to the right place, Kim. We really dig home tracks. Help you want, help you'll get! In our book, particle board is the best surface for home tracks. It comes in 3/8" thicknesses, and in 8' x 4' sheets. The price runs about \$5 to \$6 per sheet. It is strong enough to be self-supporting, yet, like masonite, it has no "grain." It is extremely easy to cut and work with.

As far as track tape goes, check the issue of MC&T coming up next, for a complete rundown of track conductors. We personally prefer braid, such as Cox's 3/16" wide Stik-Trak. Copper tape also works well. If you use the copper or aluminum tapes, by all means invest \$3.49 in a Kal-Kar tape layer. Before you start at all we'd advise spending \$2.00 for

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DYNAMIC NEWS

THE WORD FROM DYNAMIC MODELS WORLD LEADER IN MODEL RACE CAR ACCESSORIES

Vol. 3, No. 2

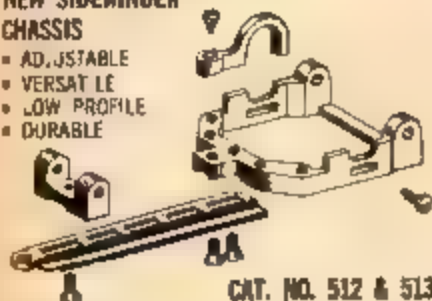
Van Nuys, California

February, 1966

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NEW SIDEWINDER CHASSIS

- ADJUSTABLE
- VERSATILE
- LOW PROFILE
- DURABLE



CAT. NO. 512 & 513

This chassis is designed to fit all large Mabuchi type motors currently being manufactured. (For example Revell 600, Cox TTX 200, old style, and the Revell SP 90, Cox TTX 250, new style, and many others in the same category.)

The motor may be adjusted in relation to the rear axle to allow the use of many different gear combinations.

The motor may be placed in the chassis with the driving shaft on either side. This means the modeler may place the driving shaft on the side that allows him to gain the maximum performance due to the direction of rotation of the motor.



MOTOR MOUNT ONLY
CAT. NO. 548 & 549

SUPER JUMBO DIE CAST WHEEL and TIRE (Soft)

CAT. NO. 672S



To accommodate the large gears used with sidewinder chassis and to improve performance on high speed tracks, Dynamic Models is introducing the new Super Jumbo Tire. (1 1/4" O.D. x 3/16" width) — the largest jumbo slick in the Dynamic tire line.

The four-spoke mag wheel is the same as Cat. No. 611 except it has a satin finish instead of chrome.

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Flange ball bearings for easy installation. 1/8" I.D. x 1/4" O.D.



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1 Spur (Avail. 28, 30, 36, 42, 48 Teeth)	2 Pinion (Avail. 8, 9, 10, 12, 14, 15 Teeth)	3 Crown (with boss and set screw)
a. 1/8" hole	a. 0.93" hole	24 28 30
b. 5-40 thread	b. 0.78" hole	32 36 40
c. Boss and Set Screw	c. 1.25" hole	
\$0.35 ea.	\$0.15 ea.	\$0.25 ea.

Get maximum efficiency in your gear mesh by using a Dynamic crown gear. Special crown gear tooth forms make it unnecessary that the center line of the motor shaft intersect the center of the axle, nor is it mandatory that this intersection be at an absolute 90 degree angle. This makes set-up much easier.



Crown gears are die cast Zamac #5 alloy because Zamac is: a. Strong, b. High work hardening quality, c. Self-lubricating, d. Inexpensive and D.M. crown gears have "lightening" holes!

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THE WORD from the PIT

By **SPEEDY GONZALES**
(Fastest Thumb in the West)

Buenos Dias me amigos! I suppose by this time you've heard a few rumors about the LSR (Land Speed Record) runs that American Ruskik is planning. No date for the event is set yet, but by the time you read this it should be getting close.

This promises to be the wildest idea to come down the trail in a long time. There will be many classes to run in, all to 1/24 scale. You can run sports, GP, roadster, streamliner, anything. It's up to you. All cars must be powered by a DC electric motor and deliver the power through the tires (no jets allowed here!) with a minimum of four wheels.

Some of the designs I've seen so far are absolutely spooky! Jim Russell said his computers predicted 179 actual mph! The runs are tentatively scheduled to be held at the Shelby American plant, along side Los Angeles International airport. Ruskik has acquired the services of one of the most "on the ball" slot clubs in America, the MESAC team from Inglewood, to handle the runs.

The problems that will be encountered during these high speed runs are enough to chill your blood! Streamlining, tire "chucking," stability; in other words, all the problems that confront the real LSR challengers will also have to be faced by the slot contingent.

I talked with my compadre, Ray Hoy, about this project. He seems to be going after the entire thing with blood in his eye. The blueprints for his monster "unlimited class" streamliner look like the original prints for the New York Subway. This multimotored "amp sucker" will be a technical challenge, to say the least. Ray says his borrowed computers predict something (he won't even tell me) over 200 mph!

While all these fun and games are going on, there are other developments that are really significant. Aurora's "Pro" program is going full swing. If you haven't heard, this is an attempt on the part of a major manufacturer, in this case, Aurora, to organize the muddy mess that slot racing (on a national scale) is in. We've got more splinter groups in

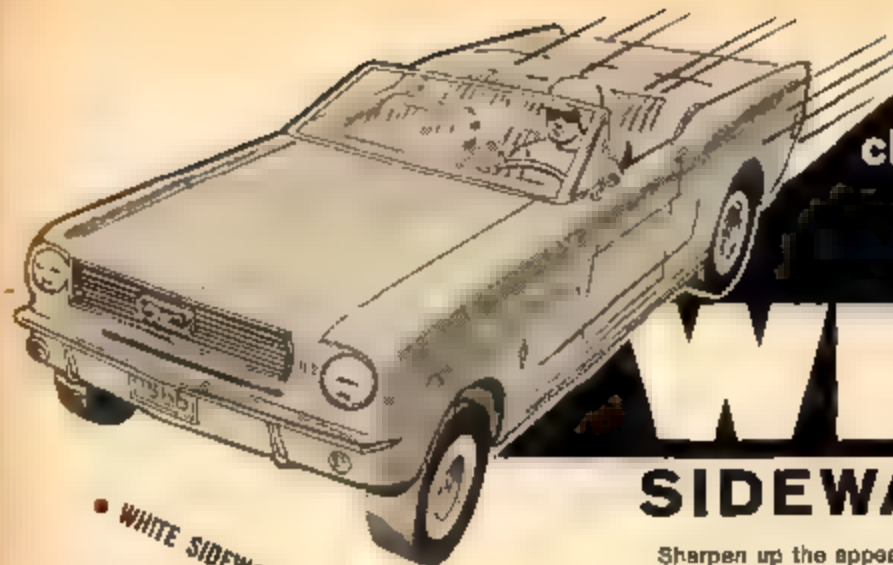
this old U.S.A. than you can shake a pistola at, each claiming to be the voice of slot racing. Aurora is willing to financially back any qualified group that will step forward and organize things. Over 600 racing centers have signed up for the Pro program. Aurora has supplied them with a manual that gives a wealth of information on how to run a shop, organize races, and generally be a hero, plus a lot of promotional material such as blazers with a Pro insignia, window banners, etc. The idea is to get the slot fan to go to his local "pro" when he needs help. Every sport has their professionals, why not slot racing?

Aurora, you and I all want to see slot racing become a "recognized" sport, not just a sophisticated version of the hula-hoop and the Duncan yo-yo. So let's get together. It's the only way. And get this. When things start shaping up, Aurora will gracefully step out of the limelight. And that's a pretty noble way to go. My sombrero is off to them. If you want to lend a helping hand or learn more about it, write directly to Aurora Plastics Corp., 44 Cherry Valley Road, West Hempstead, L.I., N.Y.

The slot racing world received a \$22,500 pat on the back recently, when Western Model Distributors closed the year with a sham-bang Championship race in San Francisco. The best racers in the west (and we grow 'em WILD out here!) were flown in via United Air Lines courtesy of the sponsors. Our own boy-editor went with them and came back with a glowing report on the hottest race of the year. And he likes United too.

Roaring out of the Los Angeles International Airport, our hero accidentally took his car keys with him. This wouldn't have been the end of the world if Mrs. B. wasn't left there waving bye-bye with no way home. But never fear, United is the Organized Air Line. 40 minutes after Jim touched down, the keys were back in L.A. Our leader hoped to keep the whole thing a secret, but somebody spilled the proverbial can of worms. Anyway, there's nothing to be red-faced about. And it might have been worse; he could've gone into orbit.

The race, as things turned out, was one mucho success. And judging from the crowds, you would've thought somebody was giving away hundred dollar bills. Maybe it was the novelty of seeing someone stage a miniature car race in the heart of San Francisco's civic center or it could have been the Triumph Spitfire going as first prize. Then again, it just might be that folks like a good race -- and that was what it was. Too bad the powers-that-be haven't planned an event like this for the Thumb on the East Coast. J.B. has bought a second set of keys and is ready to take to the air anytime.



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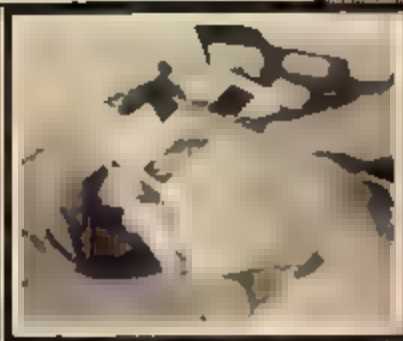
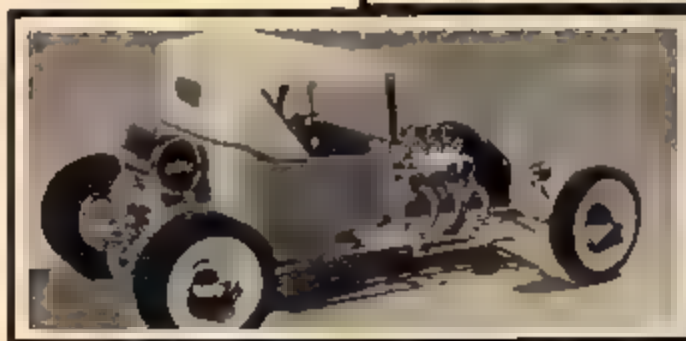
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For the model car fan who likes the
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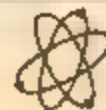
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See Page 8

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continued from page 10

"The Art Of Track Building", available from Rayline Slot Racing Co., P.O. Box 1738, Thousand Oaks, Calif. 91360. This book tells everything about building a home track. They also have a new booklet called "The Rayline Portfolio Of Track Designs," one dozen home track plans, drawn to scale, for \$2.00. Order both books for \$3.50. They're worth their weight in lost tempers!

MORE DRAG BOATS PLEASE!

Could you please give us some more information on the drag boats that appeared in your October issue? Some of the guys in my neighborhood are thinking about building a drag boat set-up if we can get more information.

Douglas Johnson
South Bend, Ind.

We've received hundreds of requests about this novel idea, Doug. We've commissioned ol' Gawge Siposs to do some more doodling on his drawing board and come up with still more ideas and improvements. You should be seeing them soon. Don't let any water from the rooster's tail splash on your HO cars though, they'll grow into 1/24 scale screamers!

A FREE HO TRACK!

Thanks for the great HO story in the December issue. You stated there weren't many commercial HO tracks around. Well, we have one in a hobby shop here that has a 60 foot lap length! We race every Thursday night, free! How about a story on how to really rework an HO car? Keep up the good work.

Doug Buckles
Independence, Kansas

Tell the owner of that hobby shop that the crew at MCS congratulates him, Doug! This kind of forward thinking is refreshing. It also no doubt sells gobs of HO equipment for him over the counter, so everybody winds up ahead. This kind of thinking is good for the entire sport! O.K., more HO articles will be forthcoming.

A NEW JERSEY READER?

I read your great magazine all the time and especially dig the writing style of Jose Rodriguez.

Richard B. Farr
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The TOOLS of the Trade

FROM SIMPLE ITEMS TO WILD MACHINES

Although it is possible for a good model maker to produce a nicely detailed model with a minimum of tools, there is no question that a wider variety of tools, used properly, makes the job a great deal easier.

Consider yourself lucky! You happen to be living in a modern model-builder's Utopia! Never before has there been such a vast variety of tools available. And in such a wide price range! If you can afford to buy a model kit, you can afford to buy the necessary tools to build it.

Where to start? This question faces every enthusiast, especially the newcomer to the hobby/sport. The answer is simple. Start small! It is your job to select a basic assortment of the most commonly used tools, and go on from there. It would be unwise, for instance, to buy some high-priced, exotic tool, if you don't already have simple items like screwdrivers and pliers!

Just what are the really basic tools that the hobby fan needs? It actually depends on just what kind of model building is going to be done. Some tools are needed by all model builders, whether they are model airplane, boat or car builders. However, if mechanics enter the

By **RAYMOND E. HOY**

picture, such as a *gas powered model, slot racer, etc.*, the extra tools must be added to the basic list.

Builders in any category should start with a hobby knife, such as Strombecker's or X-Acto's. These scalpel-like knives have hundreds of uses. Strombecker's #7025 hobby knife sells for 49 cents. A color-coded plastic collet makes proper blade selection a snap. Three different blade sets are available, a straight angle

cutting edge (color-coded red), an all-purpose curved cutting edge (color-coded blue), and a special small blade designed for close work (color-coded black), all priced at 49¢ for a set of four.

If you're on a budget, Strombecker even produces a 29 cent hobby knife, much like their higher priced model, except that it has a tapered black plastic handle with fingertip serrations.

X-Acto also produces a wide variety of hobby knives. Their #1 knife is for light-to-medium work and sells for 60 cents. Their #2 knife is similar to the #1 model, but is built for medium-to-heavy work. Price is 75 cents. A #3 knife can be purchased for \$1.20, and is for heavy work, with a rugged plastic handle and metal blade lock. Extra heavy jobs are best handled with the #6-L version, identical to the #3 knife except for a solid aluminum hexagonal handle. Price on this rugged knife is \$2.00.

An assortment of five blades, which cover nearly every situation the model maker will ever face, is available for all of these knives, at 60 cents per set.

The next tool to purchase should be a razor saw. Strombecker makes two versions. Their #7020 saw features a black, sculptured handle and a high quality steel blade. Unlimited depth, straight cuts can be made with this knife. Their #7015 keyhole saw is a variation on the razor saw, with the advantage of being able to fit the sharply tapered blade



Razor saw is essential. X-Acto and Strombecker both have excellent slicers.



Moody's Grand Prix set handles many chores.

Tiny tools galore! Moody offers these.



If you have to hold tiny parts, X-Acto's "C" clamps are great. Ticezers too!

into small areas. Price on each is 69 cents.

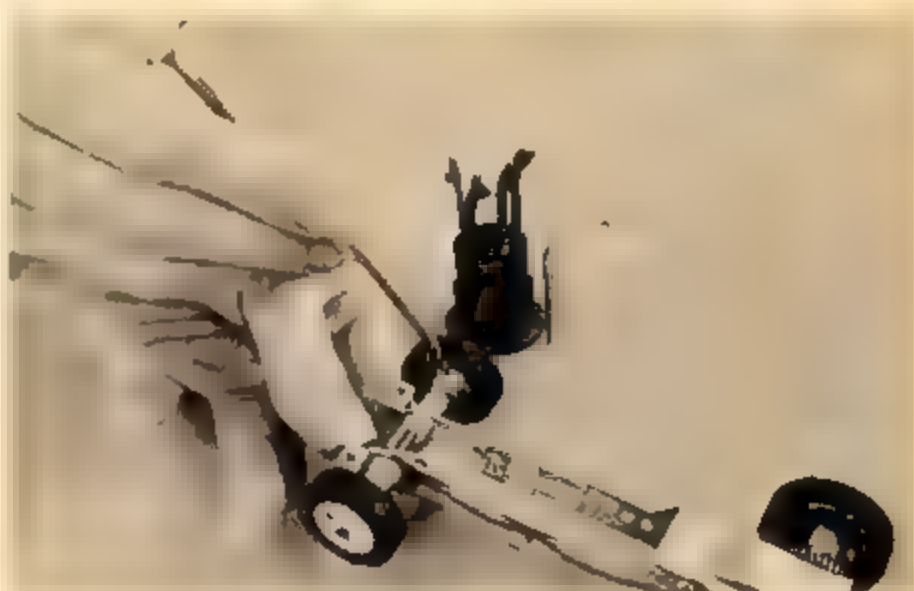
X-Acto makes an excellent razor saw with an overall length of 9½". It is sold in set #53 for \$1.75. Two blades are included, each with a 4½" long cutting edge. Blade #34 permits a cut up to ¾" deep, while blade #35 permits a cut up to 1" deep. Both blades are available separately for 40 cents and 45 cents each.

An economy measure can be taken here. If you already own the heavy-duty X-Acto knife #5, all you need to buy is either, or both, razor saw blades, as they fit the #5 handle.

A file set is next. Buy good files! This rule, of course, should apply to all of your hobby tools. They are a life-time



Strombecker and X-Acto offer a wide variety of pliers.



Moody's OE-5 open end wrench set has more uses than you can find.



investment, if you take care of them properly. Strombecker has assembled five excellent hardened steel files in set #7050 for only \$1.49. This set includes a two-sided flat file, square file, half-round file, triangular file, and a rat tail (round) file, 5¼" long. A convenient vinyl carrying case keeps them from becoming lost.

X-Acto has a variety of files. A good basic set for us would be their #361 needle file set, consisting of an assortment of six file styles suited to a wide variety of assignments, plus a universal, quick-change wood handle. Price is \$2.50. The handle can be purchased separately for only 60 cents, in case you already own a file set. It will fit all small files.

Razor saw, hobby knife and file set.

A jeweler's saw should be next. Once again, the two companies whose products are most easily available are Strombecker and X-Acto. Strombecker's #7055 jeweler's saw is a beauty, featuring a ribbed black plastic handle and a chromed frame. Four 90 degree blade angles are possible, and it features a 5" long blade that permits a cut up to 2¾" deep. Price is \$2.95.

X-Acto's jeweler's saw also features a plastic handle and a steel frame. The blade is 11" in overall length and is fully adjustable for different cutting angles. Price is \$2.25.

You will notice that all of the tools mentioned so far can be used by both the static and mobile builders. The next tool on our list falls into this category also. The pin vise is a miniature hand drill that will hold the tiny drill bits needed in precision model making. X-Acto makes several versions. Their

X-Acto's 50-ST hammer set is invaluable.



Have to bore little bitty holes? How about the X-Acto 47N-ST hand drill?



The Moody BW-5 socket set reaches those hard-to-get-at spots.



Pin vises from X-Acto and Moody.



Strombecker's cross section clamp is great for intricate work.

The static builder who knows his stuff will appreciate a block planer.



A hobby knife for everyone. Prices are right for every pocketbook.



most inexpensive model is the #21-D-ST, a precision-tooled, double-ended vise that is 3 3/4" long. It takes small or large drills in the 45-80 range. Price is only \$1.00. A more deluxe pin vise is available in their set #321-D. This consists of a precision drill with three chuck adapters. It handles all drill sizes from 44-80. The entire set sells for a very reasonable \$2.75. They also sell three variations of their deluxe hand drill-pin vise. #1-D accepts #80-60 drill bits and sells for \$1.25. #2-D accepts #63-50 drill bits, and sells for \$1.25. #3-D accepts #53-44 drill bits, and sells for \$1.50.

Moody Machine Co. has an excellent pin vise selling for only \$1.25. It has a nickel plated, knurled handle and a solid locking chuck that insures a firm grip when drilling or holding stock. It is available in two models, #PV-1 and #PV-2, which takes #67-52 drill bits.

Of course, if you have a pin vise, you need small drill bits to go with it. X-Acto offers one dozen assorted carbon twist drills in sizes from 61-80, in set #9-ST, for \$3.60. Set #10-ST consists of 12 drill bits in the 45-60 range, for \$2.50.

Moody Machine Products Co. has a set of five precision tap drills in their set #70, selling for \$3.50. The drill sizes are 3/64", #33, #50, #47, and #43. This set is ideal for cutting small holes, particularly ones which have to be tapped for threads.

A good soldering iron is essential. One

of the best for general hobby use is the Ungar 776 handle, which sells for \$1.22, and the #77 1/2 watt chisel tip, for \$2.35. You can find them in the Allied Radio Catalog.

No basic tool kit is complete without a small screwdriver set. Strombecker's #7010 contains three plated steel screwdrivers in sizes 3/16", 1/8", and 5/32", each with a swivel head for good control. Price is only 69 cents, which includes a convenient vinyl carrying case.

Moody Machine Products Co. has a wide variety of small screwdrivers, and screwdriver sets. For our basic kit their #SC-5 screwdriver and awl set seems to be the best deal. For \$1.50, it offers four steel screwdriver blades in sizes .055", .070", .080", and .100", plus a small awl. The chuck-type handle has a swivel top and is made of knurled steel.

X-Acto too, has a fine set of screwdrivers for \$1.75. Designated set #70, this handsome kit consists of an aluminum handle and chuck, five different sizes of steel screwdriver blades: .040, .055, .070, .080, and .100, plus a wood and plastic stand.

One or two small pliers should be next on the list. Strombecker makes two styles, #7040 needle nose pliers, and #7045 diagonal cutting pliers, both made of high quality nickel-plated steel and each selling for \$1.95.

X-Acto offers a vast variety of hobby pliers. The two styles we are most interested in are their #55 diagonal cutting

pliers, and #50 long-nose pliers, each selling for \$4.00.

Tweezers are very valuable to the precision model builder. Strombecker has a criss-cross tweezer, made of nickel-plated steel. It is ideal for "holding" work in confined areas and sells for only 59 cents under part number #7035.

X-Acto offers nine styles of tweezers. Their #37 criss-cross style tweezer suits our purpose just fine, for 65 cents. If you have a few cents to "splurge," their #56 nickel-plated steel tweezers, selling for 50 cents is great.

Next on the list should be a set of hobby clamps. X-Acto's set #46-ST consists of four aluminum "C" clamps, and sells for \$2.50. They're also available separately and are great for holding freshly glued model parts.

The enthusiast who works with soft woods can find many uses for a block planer such as X-Acto's #40-ST. At a price of only \$1.20, this rugged tool is quite a value. Refill blades (part #29) cost 40 cents for a package of two.

Contoured sanders too, are extremely



Moody's PA-5 allen wrench set is a great friend in any pit stop.

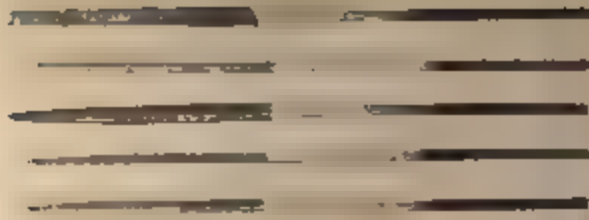


Strombecker's #7055 jeweler's saw. X-Acto has a dandy too.



American Edelmet also has this 4-in-1 tool that forms, bends, punches and you name it.

Screwdrivers anyone? X-Acto, Moody, and Strombecker provide all you need.



A good set of files is a lifetime investment.

Want to buy complete sets? How about X-Acto's "Attache" case?



Others cut out the mess in re-juicing.

handy when working with wood or plastic. X-Acto's #41ST, 1" sander sells for 50 cents, and their #42-ST, 2" sander, for 75 cents. If you want to go the route, set #351 is available for \$3.95 and contains five aluminum contoured sanders, each with different sanding heads and grip-tight handles. The heads reach into those hard-to-reach areas that other sanders can't reach.

The slot racing enthusiast runs into a few situations not common to most model builders. The sticky business of removing a stubborn motor pinion gear, for instance! Many manufacturers now produce a variety of gear pullers that make easy work of this operation. Price is only \$1.50 or so.

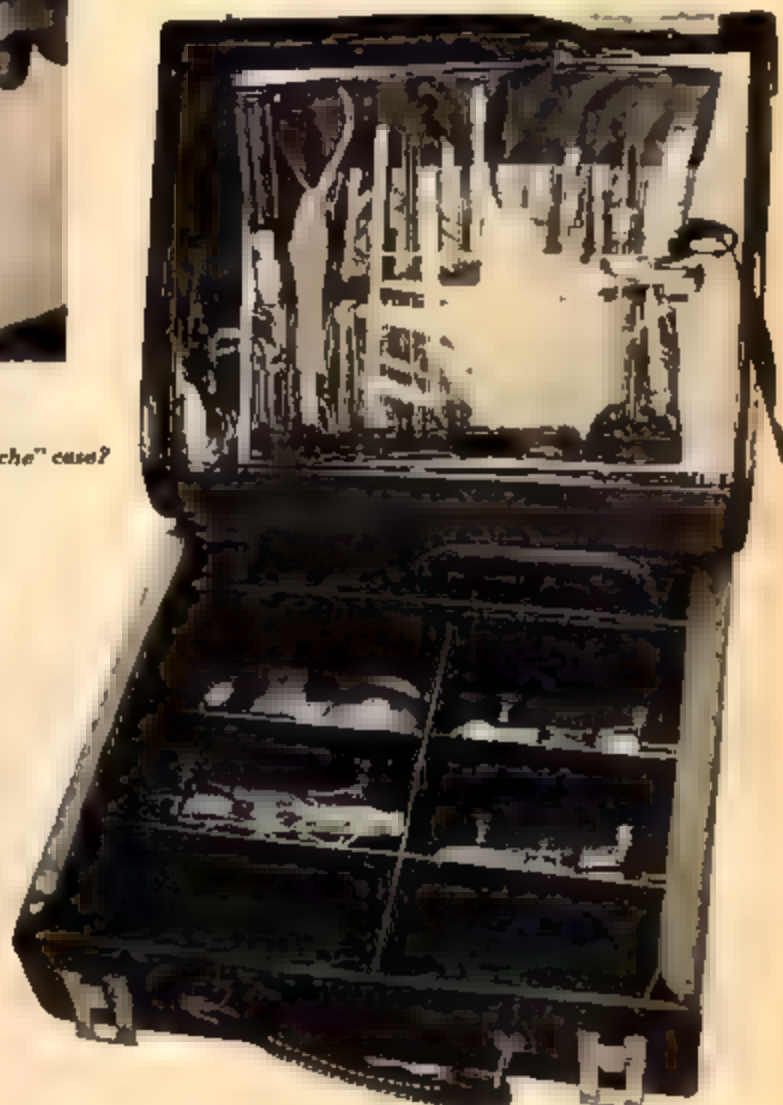
The slot builder occasionally finds a need for drilling holes larger than the

smaller sizes mentioned so far. An X-Acto #47N-St hand drill is perfect for this kind of precision work. Price is \$2.75. A set of their larger carbon twist drills is a good investment. Set #11-St features an assortment of nine drill bits in sizes 1/16" to 3/16". Price is \$3.50.

Moody Machine Products Co. has a fantastic line of precision hand tools that cover a wide variety of uses. Their \$4.95 T9-5 tap set, featuring five taps in sizes 0-80, 2-56, 1-72, 3-48, and 4-40, allows precision threading of small holes.



A soldering iron is a must. Wire holder prevents burnt thumbs and blistered tempers.



It complements perfectly their #70 tap drill set, mentioned previously.

Moody also has a socket wrench set, #BW-5, that handles five different sizes of hex nuts. Box wrenches included are sizes 3/64", 7/64", 1/8", and 5/32". A magnetic handle is included. Price is \$3.95. The same set, with a non-magnetic handle sells for \$3.50, under part number SW 5.

Moody's #OE-5 offset open end wrench set is great for the slot racing fan. For only \$2.50 you get a chuck-



Strombecker's portable drill takes the bore out of boring.



An airbrush makes flawless paint jobs possible. Badger and Strombecker have fine ones.



The Dremel Moto-Tool, shown here with bench stand, can do literally anything!

type handle, and five wrenches in sizes 5/64", 3/32", 7/64", 1/8", and 5/32"

If you run across those hard-to-get-at spots that require the insertion of a small screw, Moody's "Stl-2 screw holding screwdriver set fills the bill. For \$1.50 you can get a handle, two blades, 2 1/2" and 1 1/4" long, plus an interchangeable spring clip that holds screws during insertion.

Having completed our basic list, we can branch off into the more exotic equipment. Russkit has an excellent device for the "scratchbuilder" who prefers to build his own slot car chassis. Their \$3.98 Adjusto-Jig enables you to build a chassis from the ground up, quickly and easily. An aluminum jig keeps axles, motor, and gears in the proper alignment and position while you solder.

Dynamic Models has a great test block for tuning slot cars off the track. Wheel, tire, and gear alignment can be checked instantly, motor power checked, tires sanded true, etc., for only \$2.98!

If you really want to go the route in the motor-chassis tuning department, K-F Industries has a fantastic dynamometer for \$29.95. This marvel works just like a real dyno, checking gears and gear ratio, tires, bearings, feet per second, amperage drawn by the motor, etc.

There are many small power tools that are really worthwhile. Strombecker offers

a great electric cordless drill for \$3.95. It runs on two standard "C" batteries. And it comes complete with two drills measuring .032 and .0375, a sanding drum and de-burring tool, plus a router with a .042 shank.

Dremel Mfg. Co. has a line of power tools that will make your mouth water! Their powerful little rotary Moto-Tool is available in three models, two of which are of most interest to the average modeler. Their #1 tool is designed for light-duty work, putting out a 25,000 healthy rpm. It sells for \$25.50, complete with a metal case containing 34 useful accessories including grinding and sanding accessories, wire wheels, abrasive wheels, etc.

Moto-Tool #2 is the power tool for hobbyists! It costs \$29.95, complete with metal case and 23 accessories. This husky unit is for heavier duty work, cranking out 27,000 rpm.

Dremel also manufactures an incredible device called the "Moto-Shop." This multipurpose tool is basically a 15" jig saw with a unique power takeoff to which you simply connect other attachments. The deluxe version of this tool sells for \$49.95. It includes a disc sander,



This tiny torch by American Edelsteel welds or solders, with the flick of a finger.



Dremel's Speedial controls the speed of a drill. Priceless for precision work.

bench grinder, buffing wheel, flexible shaft, finger guard, wire buffing wheel and guard, plus many small accessory pieces for the flexible shaft such as grinding bits, etc. Scenery building is a snap with this tool. A powerful ball bearing rotary motor provides the power. The Moto-Shop is safe too, protecting fingers with a unique blade guard.

One of the most useful items for any power tool is the Lutron power tool speed control, available through Dremel. This



The #7300 Strumbecker tool kit has something for everybody.



\$15.95 item electronically varies the speed of any AC-DC motor from zero rpm to full speed. You can cut the rpm of your rotary tool down extremely slow and bore very smooth holes in the softest, thinnest metals without worrying about twisting the metal. Great for installing ball bearings in slot car chassis!

The Unimat, a miniature lathe that is the Ultimate Tool, is only 17" long! Many big slot car manufacturers use it to design and build assembly kit prototypes. Truly exotic items can be machined, one-of-a-kind chassis, etc., that nobody else has!

The basic price of the Unimat is



Racine Electric Products has this complete workbench-in-a-box.

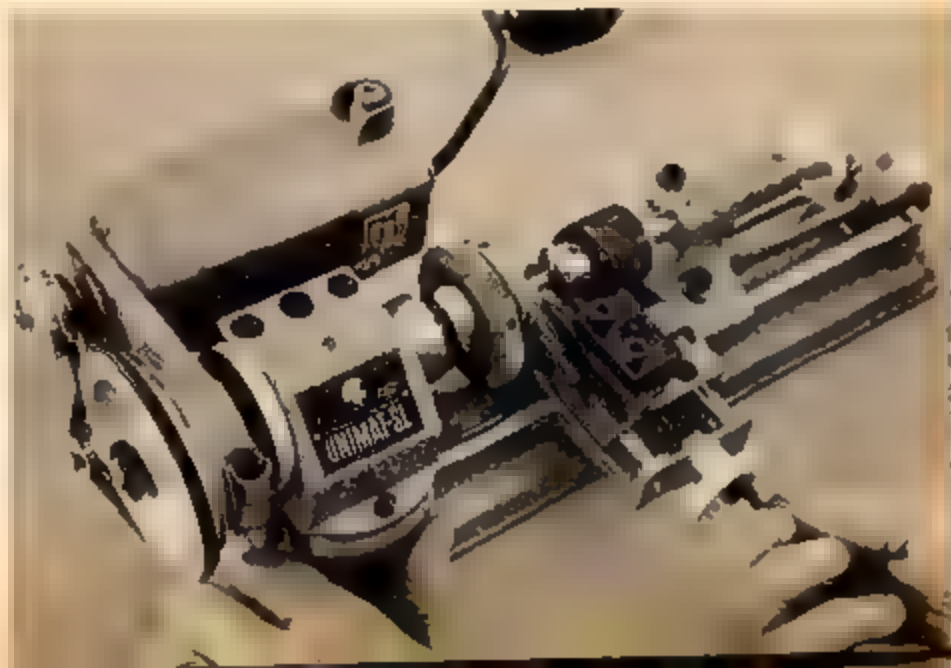
\$139.50. It includes motor, lathe and drill chucks, vertical conversion column, plus a host of extra accessories. For \$1.00 you can get the Unimat handbook containing a complete list of accessories and describing dozens of machining techniques. A really good gear puller (a \$2.98 value) is given free when you order this book.

American Edelstaal Inc., builders of the Unimat, also has some unusual items for the "scratchbuilder." Their "Hot



With Dynamic's Test Block you can check everything for only \$2.98.

The fantastic Unimat. This miniature lathe is invaluable for the creative modeler.





The Moto-Shop, by Dremel, is great for building scenery.



A power take-off on the Moto-Shop accepts dozens of accessory bits.



Those Unimet people also offer this great metal-working bending brake.



Spot" miniature gas welding torch sells for only \$19.95, and works just like the full-scale welders.

Interested in chassis building? How about American Edelstaal's Slot Car Bending Brake? You can bend and form slot car chassis easily (up to 16 gauge thick to a full 90 degree angle!) This rugged tool is a lifetime investment, and at \$19.95 is a real buy.

American Edelstaal also has a four-in-one slot car tool that forms and bends smooth sharp angles up to 90 degrees in either rod or flat metal, up to 1" wide and 16 gauge thick. It also rivets chassis parts together, up to 1" from the edges and up to 1/4" thick (maximum combined stock). It also shears metals 1" wide and 16 gauge thick, at any angle! The punch press cuts clean, sharp, burr-free holes in metals up to 16 gauge thick, and 1" from the edge. Price? — \$12.95.

The person who builds his own slot car track finds several problems confronting him when it comes time to lay the track conductor, whether it is tape or braid. Kal-Kar Mfg. Co. has a special tape layer that easily installs tape on both sides of the slot in one operation, for only \$3.29.

Cox Mfg. Co. has a special braid lay-



X-Acto has an immense line of complete kits.

Strombecker offers their #7310 handy-to-haul Master Mechanic kit.

ing device that fits into the end of a soldering iron. It heats and positions the braid on both sides of the slot at once, eliminating the tedious hand work that was formerly required. Price is only \$3.00.

Yet another mechanical aid to good model making is the air brush. Absolutely superb finishes can be applied to a model with one of these precision paint applicators. Badger Air Brush Co. has a complete kit selling for \$24.95 and a deluxe version for \$26.95. The number of accessories account for the difference in price.

Strombecker makes just the air brush unit alone for \$4.95. You must add your own hoses, compressor, etc. The air brush is made of high impact styrene with metal nozzles. A finger tip air valve control permits fine or coarse spray.

As I said at the start of this article, merely owning these tools, even if you had every single one that was mentioned, will not necessarily make you an exceptionally good model maker. However, if you take the time to learn to use each tool the way it should be used, and exercise patience, you will be amazed at what you will be able to do. Good luck.

NAMES AND ADDRESSES OF MANUFACTURERS

AMERICAN EDELSTAAL INC.
350 Broadway, N.Y., N.Y. 10013
(Catalog — \$1.00, free gear puller included)

BADGER AIR-BRUSH CO.
9205 Gate Avenue
Franklin Park, Ill. 60131
(Free Brochure)

L. M. COX MFG. CO., INC.
Cox Center Box 476
Santa Ana, Calif. 92701
(10¢ for catalog)

DREMEL MFG. CO.
2420 18th Street
Racine, Wisconsin
(Free Catalog)

DYNAMIC MODELS, INC.
13755 Salicoy Street
Van Nuys, California
(10¢ for catalog)

KAL-KAR MFG. CO.
14755 Aetna Street
Van Nuys, California

MOODY MACHINE PRODUCTS CO., INC.
42-45 Dudley Street
Providence, Rhode Island 02905

AMERICAN RUSSKIT
6368 Arizona Circle
Los Angeles, Calif. 90045

STROMBECKER CORP.
4646 West Lake Street
Chicago, Illinois 60644
(Free Catalog)

X-ACTO, INC.
48-41 Van Dam Street
Long Island City, N.Y. 11101
(Free Catalog)

RACINE ELECTRIC PRODUCTS
Racine, Wisconsin

Tweaking the "SET" Cars for

Most of the "set" cars that come with slot racing sets such as those sold by Monogram, Revell, Strombecker, Aurora, etc., are capable of turning far faster laps than they do straight out of the box. These cars are assembled at the factory, and the customer usually has nothing to do when he opens the set except place the car on the track, and GO! However, a bit of inexpensive "tweaking" here and there will produce startling results. Care to have a "go" at it?

Tires should receive attention first. Examine each tire closely. About 75% of them will be sitting in a slightly "cocked" angle on the rim of the wheel. Remove each tire. Place a thin coat of contact cement or Goodyear's Pliobond rubber cement, around the wheel rim. Replace each tire. Tug and "knead" it until the tire sits squarely on the wheel rim. Thread a wheel on an axle and place the axle in an electric drill or a Moto-Tool. Turn the drill as slow as it will go. Touch a damp rag against each

side of the spinning tire. This will "true" the tire still more, on the wheel. Do this to each tire and wheel. Set aside to dry.

When the glue finally dries, place the wheel on an axle, and the axle in the drill jaws, once again. This time use fine sandpaper placed around a wood block. Gently take off both sharp edges on the tire. Then hold the sandpaper block lightly against the surface of the tire until it is true.

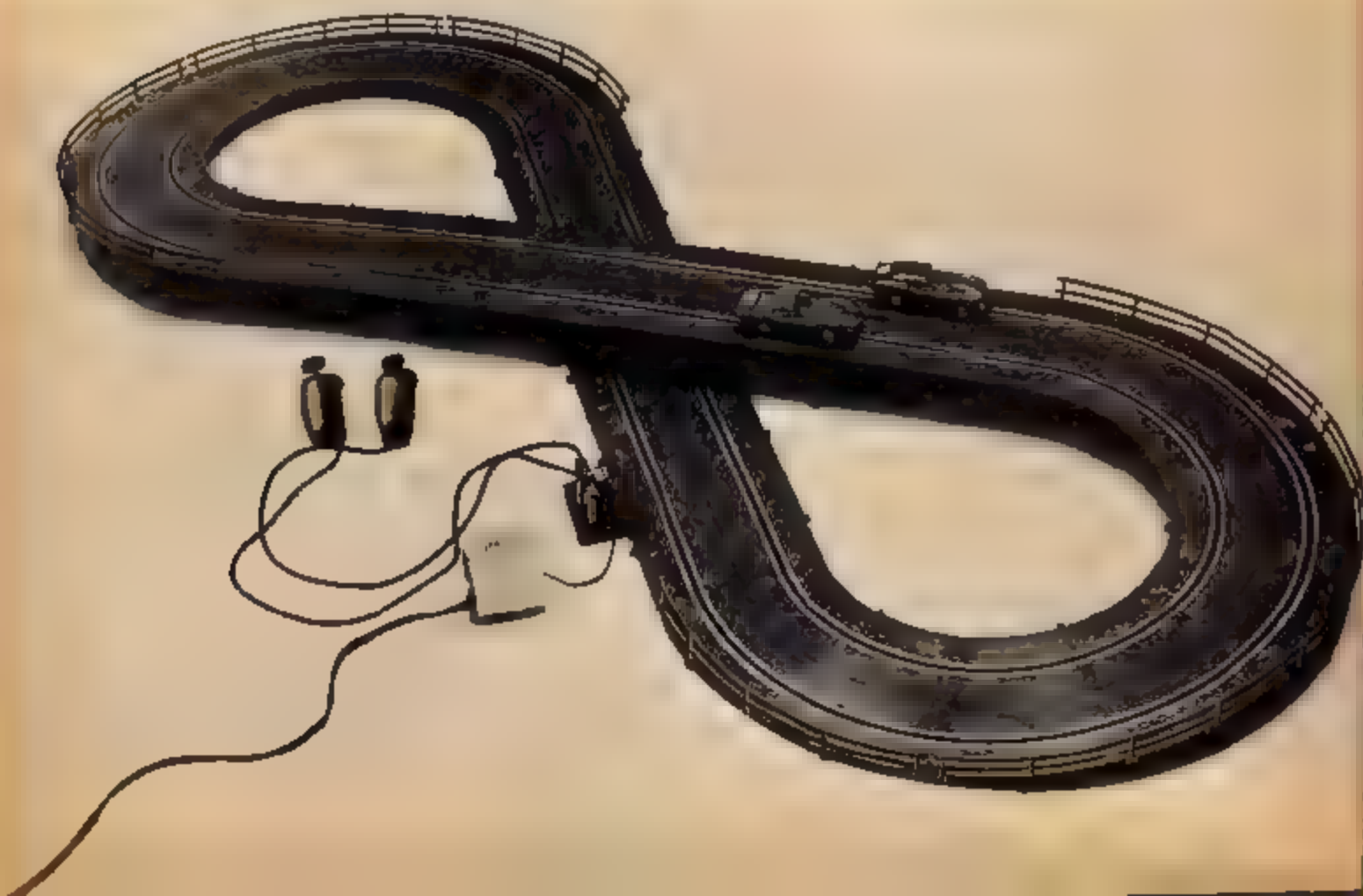
Set the wheels and tires aside. Completely disassemble the chassis. All slot



Coat each wheel with contact cement, epoxy, or Pliobond. Mount the tire squarely on the wheel rim.



Mount the wheel on an axle. Place in a drill or Moto-Tool. Hold a damp rag against the rotating tire. This "trues" the tire.



GO HOW TO GET \$100 WORTH OF ACTION FROM A \$30 KIT

By BEN DUFFY

cars use a DC electric motor. Most motors of this type will turn faster in one direction than the other. Using your power supply, check to see which way your motor turns the fastest. Merely hold the motor wires against the positive and negative connections on your power supply and listen to the motor. Then switch the motor wires and listen again. Which way does it turn the fastest? The shrill whine of the motor will tell you immediately! Make a note on paper as to which wire goes to the negative con-

nection and which one goes to the positive. Place the motor in the frame, keeping it in the same position that you tested it. If the motor rotated faster clockwise, place the ring gear (axle gear) on the right side of the motor pinion gear, so the car can roll forward. If the motor rotated faster counter-clockwise, then naturally the ring gear will go on the left side of the motor pinion.

You have probably picked up several hundred "free" r.p.m. by doing this. Just this simple operation, combined with

your true-running wheels and tires, will make a completely different car out of your "set" racer.

If your particular slot racer does not have bearings for the front axle, spend 15 cents and buy a pair, providing there is enough metal around the original axle hole to bore a hole big enough to accept the new bearings.

All bearings should either be soldered in position, or set in place with epoxy or contact cement. Always place an axle in the bearings before you do this oper-



After the glue dries, sand the sharp edges from the tire and then true the tread surface with fine sandpaper and a wood block.



Determine which way the motor turns the fastest by using your power supply. Place the motor back in the chassis.



Place the ring gear on the side of the motor pinion gear that will allow the car to roll forward.



If you have enough "meat" around the front axle hole to allow drilling, tap out a hole for bearings. Deburr with a file.



Solder or epoxy all bearings in place. Leave the axle inserted to make sure the bearings are properly aligned.



Make certain the body does not rub against the body at any point. The motor will heat up immediately if there is any binding.

ation, to make certain the bearings are perfectly aligned.

Make dead certain that there is no binding anywhere in the chassis! A slot car motor is powerful, indeed, but it hasn't the torque to overcome the drag that a bind somewhere in the chassis, causes. If you have to, set it up a bit loose, rather than snug. Your car will go faster and last longer.

Pickup brushes are a potential trouble spot. They should not be stiff. If they are, throw them away and shop until you find a springy pair, the thinner (in thickness, not width) the better. Install them as shown in the photos. Soldering eliminates the problem of wires coming loose at a critical time.

Some of the gear sets that come with racing sets leave a little to be desired. If you can part with \$1.50 or so, by all means replace the stock set-up with bevel gears. About 3.5:1 or 4:1 ratio. Once you set them correctly they wear nearly forever.

A light shot of oil on all bearing surfaces further decreases friction and increases reliability. A bit of gear grease placed on every other tooth only, provides just the right amount of lubrication. Too much grease on a high-revving gear will result in a great deal of it being thrown onto the track.

Another modification that will bring instant results is the installation of a wider rear wheel and "slicks", particularly on a plastic track. There are many good wheel-tire combinations on the market.

Make certain the body is not rubbing against the tires, particularly if you install the bigger slicks on the rear.

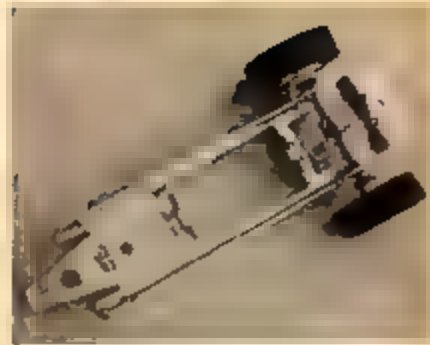
Always keep your car spotlessly clean and everything properly adjusted. Without spending much money you can increase performance immensely. What a feeling of pleasure when one of your competitors strolls up to you and quietly asks "whatcha' running in that bomb, chum?"

The installation of wider rear wheels and "slicks" will probably help on your plastic track surface. Watch body clearance!

It may look the same from the outside, but it's what inside that counts!



Pickup brushes should be very flexible. Mount as shown here. Brushes should not "lift" the front end of the car off the track.



If you have a few spare pennies, replace the stock gears with bevels. Once they are adjusted they will wear indefinitely.



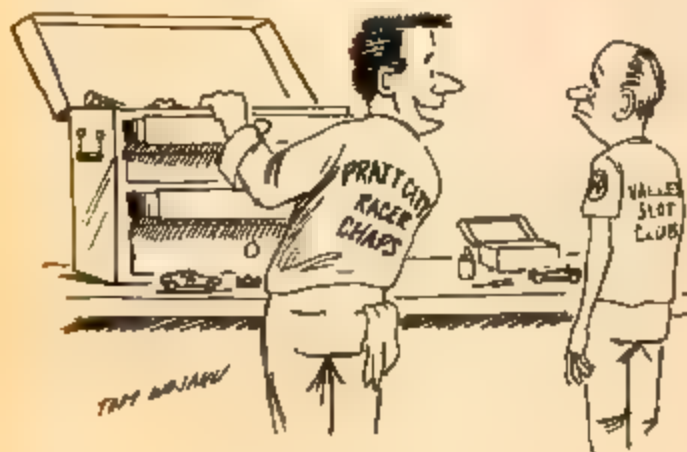
A light shot of oil on all bearing surfaces further reduces friction and increases reliability. Grease gears very sparingly.



WOJAHN'S WILD, WILD WORLD



"What do you mean, what is it! It's my first fiberglass body!"



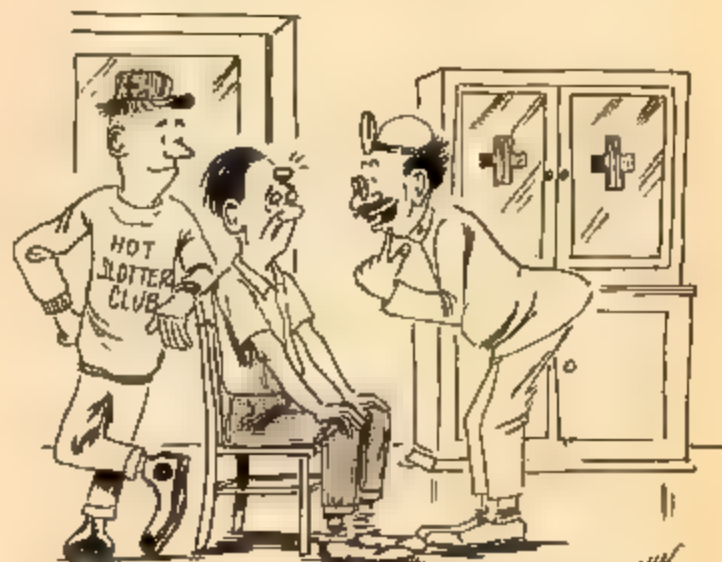
"Can I borrow a pair of pliers, pal?"



"I guess I'll have to use more epoxy on these rewinds!"



"I hear you fellows enlarged your track!"



"I'd say he's in very good shape for having been hit by a Ferrari doing two hundred miles an hour!"

GO INDEPENDENT...

AND PUT MORE ROLL IN YOUR WHEELS

By Bob Hoepfner

Going independent in the Slot World has to do with the front wheels of your favorite model slot racer. Installations in which each wheel can rotate independently of the other is gaining in acceptance of late. And you don't have to look far into the theory of why to see the advantages in handling that this installation will make in your model.

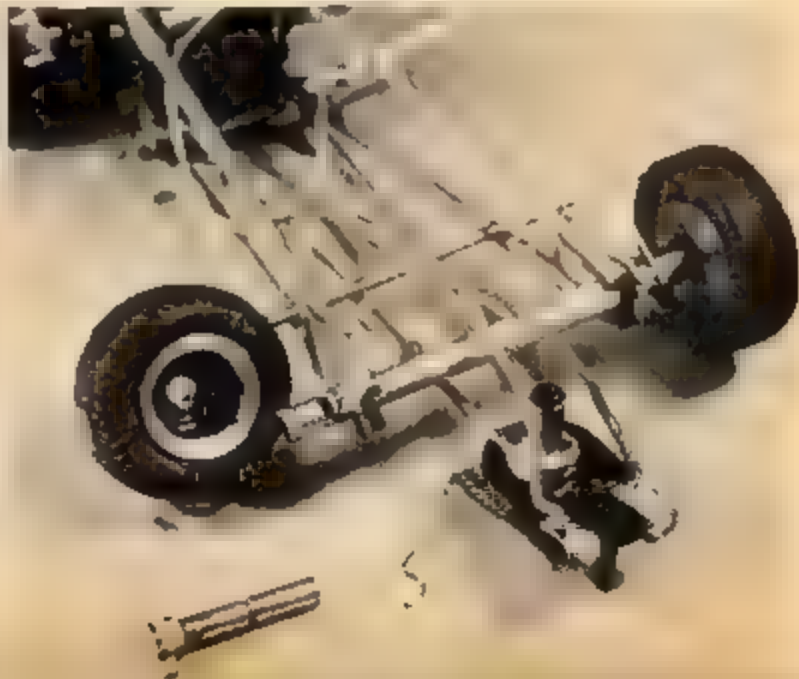
There are many ways in which this can be accomplished. The "advanced" scratch builder will no doubt find many more than the ones we will discuss. The illustration covers the five methods to be described. In the first three the wheel rotates on a fixed stub axle. The last two have the wheel fixed to a short stub axle that rotates within a tube.

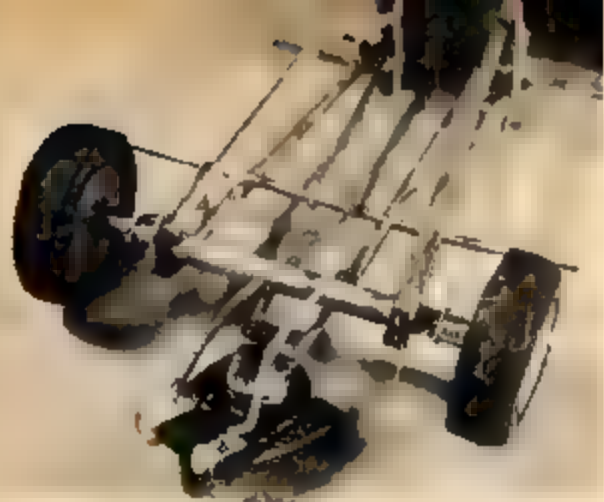
For the installation of method "A" the axle now on your car may be used if the ends have a minimum thread length that will allow the installation of two hex head jamb nuts, plus the thickness of a frame side member. Any extra length is fine; it will allow variations in tread by changing spacer length. Begin by cutting the axle into three parts. The center section to be discarded should be

Short stub axles are used to mount wheels on this installation. Tread may be varied by amount of spacers between wheel and jamb nut. See sketch A.

A variation of the "A" type. Axle is threaded into the wheel and turns in bushing. Retained by soldered nut inside bushing.

This is a combination of both method B and C. Note the grooves in the axle, the matching slot in the axle tube and the retaining spring.





For maximum strength the retaining slot in the axle tube should be inside the frame tubes.



The easiest way of all. The Ulrich axle assembly held in place with two spots of solder. As it has a 1/8th inch diameter it is interchangeable with all standard axles.

between 1/2 to 2/3rds the width of the frame. The threaded ends are now installed in the frame holes with a hex nut on either side. Drill out the holes in the wheels to 1/8th inch; slip on axle stubs to determine proper length of 1/8th inch inside diameter tube to use as a spacer. Install spacer tubes and wheel on axle stubs. Slip a washer on the axle and solder in place and you're done.

With method "B," cut a piece of 1/8 I.D. tubing equal in length to the distance between the inside notch through the tubing wall at some convenient point between the frame rail and the tube end. Cut the axle as in method A. Run a hex nut down to the bottom of the threads and cut off any excess. Slide on the wheel, drilled out to 1/8th inch diameter and then slip the axle inside the tubing. Drop a spot of solder in the tube notch to retain the stub axle.

A very light weight and reasonably easy method, "C" should be used on G.T. or sports car installations as the use of tubing does not have quite the strength of a steel axle.

From the sketch you will see that a length of brass tube replaces the axle with the wheel rotating on it as in the previous methods. The tube should be 1/8th O.D. and of a length that will allow approximately 1/16th inch to project beyond the face of both wheels. Spacers of 1/8th inch inside diameter tube provide a shoulder for the wheel as well as determining the tread dimension. The short length of tube exposed on the outside can be flared as shown, or have a washer soldered on, holding the wheels in place.

Method "D," most involved of the group, has one advantage in that the axle may be changed much more quickly than with the others. In this installation a short axle is locked to the wheel with a jam nut. The axle rotates in the tube and is retained by a spring wire clip riding in a groove near the inboard end

of the axle. Using a jeweler's saw, cut a slot approximately 1/3rd through the axle tube. Run a hex nut on the axle to the bottom of the threads; slide into the tube allowing clearance for the nut.

Using the saw, cut a shallow groove in the axle all the way around by slowly rotating the axle. Remove the axle and make the groove a slight bit deeper than the slot in the tube to allow clearance for the spring clip used as a retainer. The clip shape will depend upon your particular installation and whether you wish to incorporate the quick change feature. The simplest would be a "U" shape soldered to the tube opposite the slot. A quick change type should have a means

of grasping it, as well as radiuses on the ends to aid in spreading them for reinstallation.

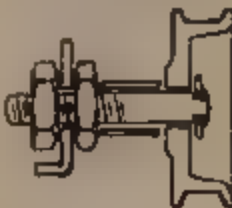
We haven't told you before, but method "E" is by far the easiest of the lot. Just step up to the counter of your local raceway and ask for one of Ulrich's new independent front axles in a length that will fit your car. Remove your old axle and slip the new one in place. Center it properly and place a drop of solder on each side of the frame to hold it. This one does not require enlarging frame holes as both "B" and "C" do, since the stub axles have been turned down to fit inside a 1/8th inch O.D. tube. What could be simpler?



STANDARD



METHOD C



METHOD A



METHOD D



METHOD B



METHOD E

MCS CUSTOM KLINIC: HOW TO CHOP A TOP



Just look at that old fashioned top! Out with the machete, fellas!

You say you have a tall top that you don't savvy? Then out with the machete and charge behind me, while we try our stuff at chopping a top.

The old timers with the beautiful upright posts are the easiest to chop, while the later fastbacks or any body with

curved tops cause a bit more work. Decide what you want to eliminate (a six inch scale chop, etc.), and cut a piece of striping tape to the proper width. Place it all the way around the top. It will serve as a guideline.

Only a few minor tools are needed to chop a top. A razor saw, such as the X-Acto version, is invaluable. A #1 X-Acto hobby knife is handy for cleaning up small ragged edges etc. All you need otherwise are some of the basic model making materials such as #600 wet-or-dry sandpaper, body putty, primer, and spray paint. An X-Acto contour sander really helps too.

Cut the top loose from the body with a razor saw, using fine, short strokes. Cut along the top edge of the striping tape, then along the bottom edge.

The straight-post top will fit right

down in place with no problems. The fastback has to have its top "stretched." Do this by simply cutting the top in half. Spread the two halves and match the posts up. Fill the space in the top with scrap plastic.

Fit a small "V" wherever a seam is to give the body putty a "grip." A bit of alcohol will keep the putty at the proper consistency while you work it in place with your fingers. When the putty dries, sand the seams smooth with the X-Acto contour sander.

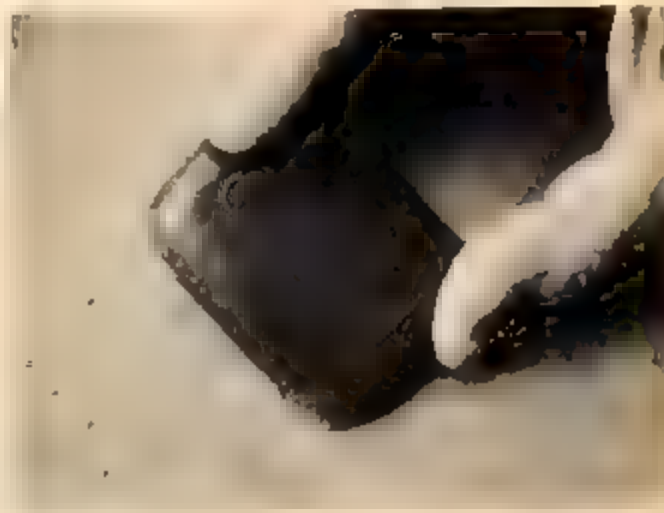
Once you're satisfied with the sanding job on the seams, sand the entire car with #600 paper. Then lay on a coat of primer, sanding between each light coat. Give the shell a final sanding and spray with whatever color and type of paint you wish. The candy and metalflake jobs require an underbase. Several thin coats are the answer. After the final coat has "cured" for a least a week rub it out with a rubbing compound. Apply decals and other accessories. That's all there is to it!



The old timers are the easiest to chop, the fastbacks the toughest. Decide how much you want to chop. Apply tape around the entire top.



Cut the top with a razor saw. Use careful, even strokes. Use the top and bottom edge of the tape as a guide line.



When the top is cut free, sand the edges on a piece of wood covered with sandpaper. This straightens the cut. Do the same to the body.



Glue top in place. Use body putty to fill the seam. A bit of alcohol keeps the putty pliable while you work it in place with fingers.



After the putty is thoroughly dry, sand smooth, using an X-Acto contour sander.

If you're satisfied with the finished sanding job, give the entire body shell a sanding with #600 wet-or-dry sandpaper.



A light coat of primer will show up any defects. Sand between coats with #600 paper. About three light coats should do it.



Warm the paint. Spray the body with your favorite enamel. If you go the candy or metalflake route, don't forget the base coats!

After the paint has cured thoroughly, rub the paint job out with a polishing compound. Install the windows and you're in business!



Double Duty HAND CONTROLLER

By JIM BREWER

FLICK A
SWITCH AND
YOU CAN
HANDLE
ANYTHING



You've decided you're going to win this race! And as you set "old faithful" down on the track, you can't help thinking how surprised the boys are going to be. Little do they know that under that battle scarred body you've just installed a hot little motor that swills juice like it thinks amps are made out of oranges.

But, do you think you can run that hot little mill with your old 25 ohm controller? Anyone knows that with a low resistance motor you'll waste half

Check with a local electronic shop; you'll want one fixed resistor, rated at 25 ohms, 5 watts, measuring 7/8" long x 3/8". The switch should be 15/16" long x 3/8", rated at 3 amps, 125 volts, SPST.



Having disassembled the controller, determine a location for the switch. On one half of the controller, mark off a recess for the switch.



The other end of the short wire is then connected to one side of the switch. Both connections should be crimped with pliers. Add some resin core solder for extra strength.



To wire in the new resistor, bend wire as shown and crimp it to the connector on the far end of the old resistor.

MODEL CAR SC ENCE

your control before you even get moving. You might as well use on and off buttons.

Well, you could have exchanged or re-wound the controller resistor for a lower resistance. But what about your other 12 volt motors that work just fine with a 25 ohm controller? With a low resistance controller, they'll run fast at the slowest setting and thus deprive you of the sensitive control required to negotiate sharp corners at lower speeds.

Fortunately, though, you've used your head. The boys are still going to be in for a surprise. And here are the photographs to prove it. A dual resistance control! High or low — take your pick.

A mere flick of the switch allows you to change the characteristics of your controller to match the motor you use and to give you sensitive control through the full range of the trigger or plunger.

To build this modification into a controller requires the addition of only two inexpensive parts (a resistor and a switch) that can be purchased at an electronics parts store for 85¢ or less.

The general idea illustrated in this conversion of a Ruskit 25 ohm controller can be applied to modify almost any variable resistance controller.

To start, a choice is made as to the lower resistance desired. (See box.) If one half of the original resistance is suitable as the lower resistance of the controller, it can easily be accomplished by the addition of a new resistor of the same number of ohms as the original. In this case, the 25 ohm controller is reduced to 12.5 ohms by wiring a new 25 ohm fixed resistor in parallel with the existing 25 ohm variable resistor.

A simple on-off switch connects the new resistor in parallel and results in a 12.5 ohm controller; or, if the switch is flipped to disconnect the new resistor, the controller reverts to its original resistance of 25 ohms.

To take a telling toll at your next track tussle, follow the photographs which show, in detail, how to install the switch and resistor, and double the versatility of your controller.

To determine the value of the new resistor, use the following formula.

$$R_2 = \frac{R \times R_1}{R_1 - R}$$

R = Desired resistance
 R_1 = Controller resistance
 R_2 = New resistor

For example, a 25 Ohm controller can be converted to 10 Ohms by adding a 16 Ohm fixed resistor.

$$R_2 = \frac{10 \times 25}{25 - 10} = \frac{250}{15} = 16.67 \text{ Ohms}$$



The recess has been cut out with a small saw. Now you have to scribe holes for the mounting screws, drill and then mount the switch.



Cut two pieces of plastic tubing about 1/8 to 1/4 inch long, and slice each lengthwise on one side. Glue them inside the controller and let dry overnight.



While the glue is drying, cut a short piece of solid insulated wire to connect one end of the controller resistor to the switch. Attach it to the right of the brake wire.



The remaining lead of the new resistor is solidly attached to the second terminal on the switch. A small amount of solder completes the wiring.



With the controller re-assembled, you can now get back in the action and know that with the flick of a switch you'll always stay in control.



BUILD A BOOTH FOR SPRAY PAINTING PERFECTION

BY DICK HELM

Find a cardboard box of proper size. Carefully cut each "front" flap off.



Use a glass for a template and draw in the "exit" hole, which will exhaust air.



Carefully cut this hole, using an X-Acto or similar sharp knife.

Form a piece of lightweight cardboard into a circle. Staple together and insert.





Cut a slot in both sides of the box, again using a sharp X-Acto knife or razor saw.



Insert the crosspiece. Note the hole drilled in the center to accept the turntable.

Have you ever spent hours preparing a car for painting, filling every tiny imperfection with putty, filing, sanding, etc., and then have the final paint job ruined by dust settling on the wet paint?

Have you ever had an irate wife or mother scream at you for allowing a huge cloud of paint "overspray" to settle on her kitchen table?

Have you ever accidentally dropped a freshly sprayed car body on a soft rug, like a friend of mine recently did? He would have been 28 years old this September!

If the answer to any of the questions is "yes," this article is for you! I'm going to show you how to build an inexpensive spray booth that will not only eliminate the problem of doing battle with mother or Mrs., but will also show you the way to perfect paint jobs on your models.

A spray booth can be made out of just any material. A large cardboard box, in good condition, is perfect. You can pick up one at just about any grocery or department store, for the asking. If

you wish, you can construct a large wood box, using lightweight masonite or plywood sheeting (not over 1/4" thick) for the top, back, sides, and bottom, and 1 x 1" wood for a frame.

The drawings show the general shape of our paint booth. You can go larger or smaller, depending on the size of the models you intend to paint. The turntable allows the model to slowly rotate while you spray, so you can get at it from all sides and angles.

A small electric fan can be purchased quite inexpensively, especially if you have an army surplus store near by. Many discount houses have small fans. If you don't want to spend the money for a permanent fan for the spray booth, simply borrow one of your household electric fans and place it in the intake compartment of the spray booth. It will not hurt the fan at all, as it will not be in contact with the spray paint.

A furnace filter, made of spun fiberglass, removes any impurities from the incoming air. The spray paint "dust"

inside the paint booth is forced out through the exhaust port in the box.

A window has been provided in the spray booth to see through. Access ports for both hands are in the front. Shielded openings for lights are placed at convenient locations around the box to light your work area.

Unless the electric fan operates at an extremely slow speed, do not operate it while you are actually spraying. Run the fan for a few minutes before you insert the model into the box, to remove any "dead" air and impurities, then shut it off. Spray the model. Then turn the fan on for a minute or two to clear the booth of spray dust. Shut it off and let the model set until the paint hardens enough so it will not "catch" dust. You can then remove it and set it inside a dust-free box until it completely "cures."

You will find this simple spray booth to be invaluable. It will allow you to do better work under controlled painting conditions. Now you have no excuse for bad paint jobs!

Cut a small hole in top for lighting purposes. Glue a piece of fiberglass in place.

Place nail through cardboard turntable and set in place. Position lights. Add the curtain in front and you're in business!



HOW TO WIN A CONCOURS

THE RIGHT AND ONLY WAY TO BUILD A SLOT CAR

O.K. I heard you the first time! You said you aren't interested in chopping, channeling, sectioning, frenching, leading, etc. You think anyone who spends countless hours building a car, only to set it on a shelf and stare at it, has a funny brain. O.K., that's your privilege!

BY RAYMOND E. HOY

You can take the "Kustoms" or leave them, but why should your slot car have to suffer because of your lack of interest in painting and detailing, and your over-

interest in speed and "modifications?"

It's just not necessary to butcher a perfectly good looking car kit, in order to install over-size spongies, spread the tread to Pontiac "wide-track" proportions, and generally deface an originally beautiful body shell, all in the name of "modification." I suppose if I enthusiastically smashed my head against a wall for a half hour I would succeed in "modifying" my cranium, but I doubt if it would improve its performance!

And those paint jobs some guys seem to favor! Ick! Fingerprints here and there, glue smeared on the windshield, decals on crooked (if at all!), and little rivulets of paint standing here and there in pools. It's enough to make you want to go take a pill and lie down for a while!

Now let's build a kit the *right* way! If you think you're going to lose out on the performance end of the deal, just because your car will be sporting a gorgeous body shell, and using scale wheelbase and tread dimensions, think again! If anything, you'll turn a faster lap just because of the additional shot of confidence you get from looking at this "sweet swinger" you have built!

If you follow our simple photographic sequence you will not only have a rapid piece of machinery, you will have a *gorgeous* one too. Later on you can swap armatures, install ball bearings, etc. You've got to build a good house before you can stuff fancy furniture inside! Right? So come on, let's have a go at it — Concours style



To start the job, smear a thin coat of contact cement or Goodyear Pliebond on each wheel. Apply it evenly over the entire surface.

Thread the wheel on an axle, and place the axle in a drill. Hold a damp rag tightly against the rotating tire to "true" it.



When the glue dries thoroughly, hold a sandpaper block against the face, and edges of the tire. Use light pressure.

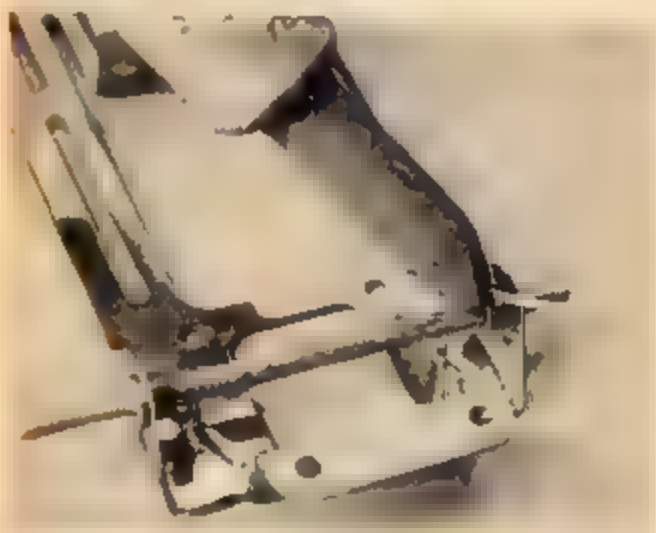




Using a power supply, find which way the motor rotates the fastest. You can usually tell by listening closely. The motor will be installed in that position.



You can "fray" the ends of the brushes for better contact. Solder one end first. Use a needle to "unwind" the braided brush.



Using an axle inserted in the bearings for alignment, solder or epoxy the bearing in place. It will not turn in the mounting hole now.

Fill any low spots with several thin coats of body putty, allowing each coat to dry before the next is applied. Sand with #400 sandpaper.



Gently scrape the parting line from the body. Clean up all body shell edges with the side of the blade. Be careful you don't gouge the plastic.

The entire shell should be lightly sanded with #400 or #600 wet-or-dry sandpaper. Take your time and do a slow, careful job.





Apply several thin coats of primer, from about 15" away. Allow each coat to dry thoroughly and sand between coats. The final sanding should be done carefully.



Mist the first coat of enamel on from 15" away. Lay several extremely thin coats on, allowing the paint to dry between coats. No sanding!



When the final coat dries, finish detailing with a #000 brush. Outline openings with an X-Acto knife and India ink. Wipe off excess.

Detail the driver before you install him in the car. It makes the job a lot easier!

After the paint "cures" for three or four days, rub it out with wax and a soft, fluffy, clean rag. Not too hard!





Hand letter the sidewalls, using white paint and a #000 brush. A bottle of thinner washes away boo-boo's!

If there is just too much chrome to suit you, cover it with Testor's Silver spray or bottle enamel.

Attach the windshield, mirrors, etc. If you can, fuse the parts in place with a soldering iron. Touch the locating pin only!



Now I ask you, would you rather have this gem or one of those "side track" dune buggies? And dig that classy scarf; it does something for the driver — just what is kinda hard to say.



MCS: MODEL OF THE MONTH CONTEST



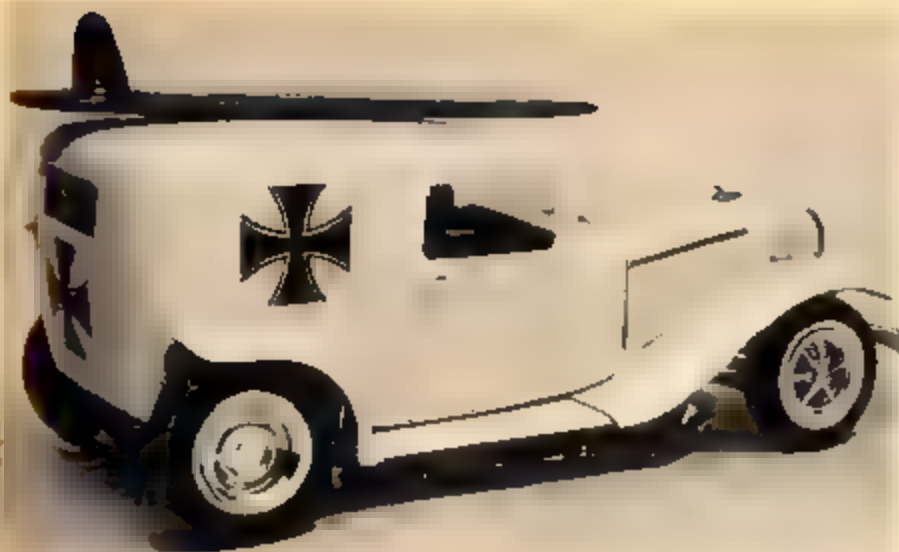
THE WINNER ... of this month's \$25 Savings Bond is Jim Capogreco, of R.R. 2, Box 134, Mims, Florida. To top the competition, Jim went custom with AMT's '65 Cobra, adding umpteen hours of eye-watering detail.



For the finish, Jim used AMT's Devil Red and added GT stripes. The undercarriage is done in black and silver, with walnut contact paper for a special touch.



With a helping hand from that old putty can (Jim used AMT's), the body was restyled through the addition of front points, head rests and rakish fins.



With Water Board and Hun decals, here's another custom jobber from Chris Geiger. Based on a '32 Ford Panel, the rear fenders have been bobbed and a rear door added.



Take AMT's '64 Chevy; add a '64 Pontiac hood up front, a '63 T-Bird hood on the rear and a '58 T-Bird roof on top. What you have is this custom number from John Brandimarte, of Pooli, Pa.



This '40 Ford dragster from Rick Meider, of North Highlands, Calif., sports a two-tone finish of ruby red. The body has been chopped, sectioned and fitted with a 427 Hemi engine. The frame is Revell's 22 Jr.



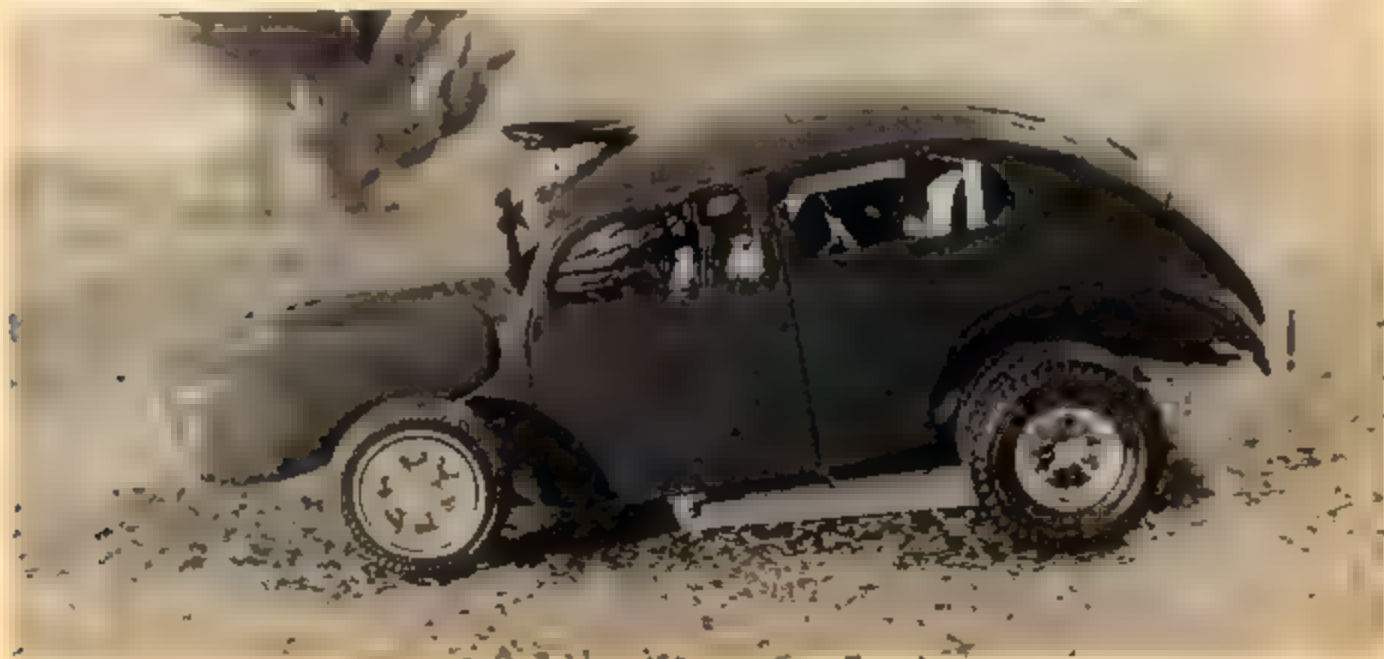
12 coats of hand rubbed royal blue metalflake dress up this '40 Willys from Chris Geigel, of N. Merrick, N.Y. Doors, hood and front and rear windows have been hinged.

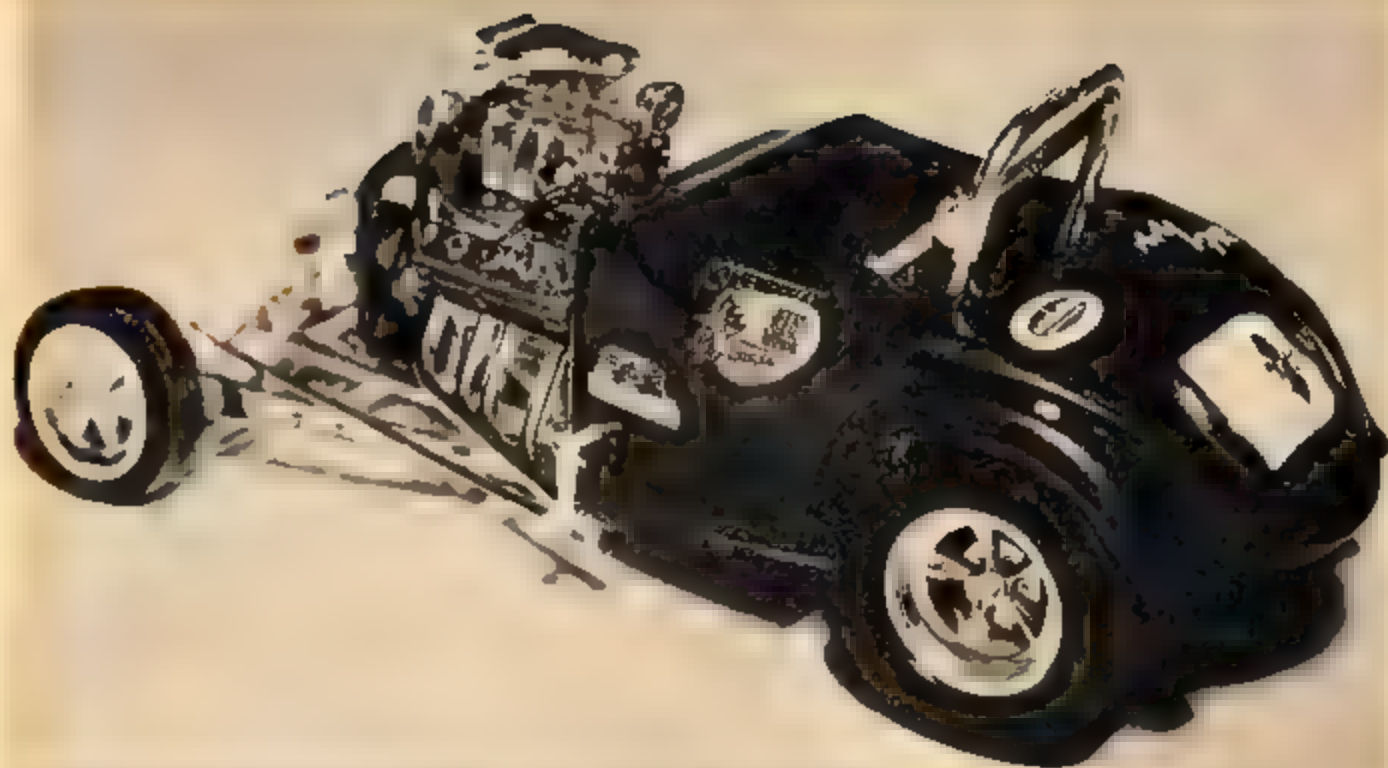
Custom touches for this '49 Merc from Ray Jackson, of Oak Lawn, Ill., include an interior full of funny fur and a '57 Chev hood on both ends. The roof also got a nice chop job.

Customizing couldn't be wilder on this '40 Ford Drag Sedan from Harlan Dostal of Howells, Neb. That's the engine sitting in the front seat, with the front roof section cut to fit.

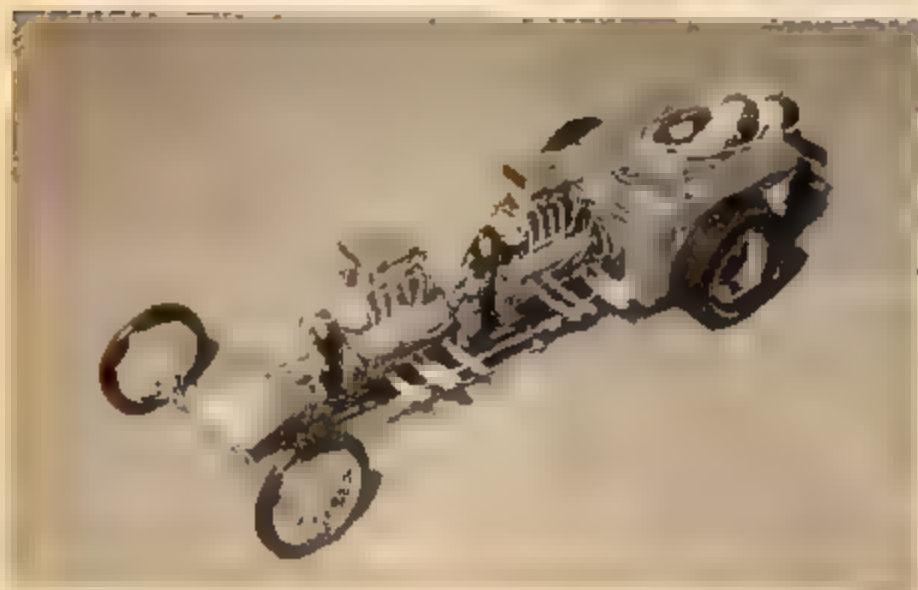


Dubbed the "Little Jewel," this rejuiced '23 T Roadster comes from Mike Gillette, of Glendale, Calif., and sports a Revell Tweety Pie frame, top and interior. Finish is AMT Line Gold Metalflake.





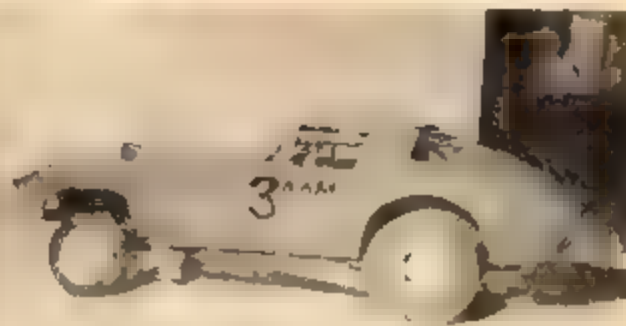
From Tom Saymcsyk, of Burlington, N.J., comes this "gear" AA/Fuel Roadster, with a blown Chrysler mill fully detailed. Body and tonneau cover were molded together and finished in metalflake red with black jogging.



Two Tony Nancy 22 Jr. kits went into the making of this doubled dragster from Mitchell Fox, of Meriden, Conn. The frame was lengthened and running gear reworked to fit the extra engine.



Shades of the Fisher Body Contest! George Prentice, of Columbus, Nebraska, a winner in last year's event, sent in this view of his new futuristic hardtop, done in cinnamon and viceroy brown.



Paul Herfel, from Hicksville, N.Y., used a number of kits to build this '65 Drag Vetta. The body came from MPC, with the Cad engine built by AMT. The front boost comes from a '55 Chevy Nomad suspension system.

AMERICAN PUTS YOU IN THE REAL GEORGE DRIVER'S SEAT

We recently attended a grand opening in Panorama City, California that really was out of the ordinary. The place? The Tom Thumb Family Racing Center.

What's that? You say that this particular Tom Thumb center has been open a long time already, so why the grand opening? We'll tell you podnah. You're thinking of the old Tom Thumb shop, where they used to race those little cars with those "old fashioned" hand controllers. We're talking about the new Tom Thumb, where all the old "hot thumbs" now drive by the seat of their pants!

You see, American Model Car Raceways, Inc., the owners of Tom Thumb Family Racing Centers has come up with a new system for controlling a slot car. Steering wheels and foot accelerators!

According to Denny Dennison, Vice President of American, this move puts model car racing into a "new era." He contends these "revolutionary" new raceways will add realism to model car racing.

With American's new raceways, drivers sit in bucket seats behind full-size



Stab 'EM and Steer 'EM



While this little guy hotfoots it around like an old pro! The system is very easy for "New Guys" to get used to.

Looking a little like Gemini Central at Cape Kennedy, the "Go Panel" at Tom Thumb keeps a space age check on who's leading the pack.

MODEL CAR SCIENCE



MC&T's Bob Schleicher gives it a whirl, while his wife looks on. Maybe she's a lap ahead!



Steering and stabbing takes getting used to, but in a few minutes any former Thumb-Bender with at least a hint of co-ordination can send his little charger whipping down the track.

steering wheels. To make the car go forward, the driver must depress a full-size automobile-type accelerator, on the floor. When the car approaches a curve, the accelerator must be released, of course, just as though the driver were using a conventional hand controller. If the curve the car is entering is a left-hander, for instance, the driver must turn the steering wheel to the left at the proper time. If he doesn't, the power is interrupted to the car and it stops! Naturally, the procedure is exactly the same for a right hand corner.

This system requires more coordination from the driver than a conventional hand control unit does. You definitely have to "drive" the car!

The grand opening was a study in

mixed emotions. Old-time thumb-benders stood around eyeing the proceedings with skeptical looks on their faces. The newcomers however, youngsters, oldsters, and all ages in between, seemed to be having the time of their lives.

Our man with the sneaky roving camera caught Mr and Mrs. Robert Schleicher cautiously lapping the circuit. Bob Braverman, another well-known writer from one of those other magazines, also loomed around the track, concentrating intently on the job at hand. Ray Hoy sipped coffee and looked amused about the whole thing until George Siposs lured him into a duel. The last we saw of them they were racing for cakes!

The new driving system does not require any changes whatsoever in model

racing cars. All 1/24 and 1/32 scale cars can be used. The accelerator is an integral part of the raceway system, so leave your controller at home.

Although steering wheels and foot accelerators may never become popular with the home track enthusiasts, they might be just the thing for the commercial track proprietors. The followers of model car racing are the first to admit that realism is essential in order to fully enjoy the sport. We can testify that after a few minutes behind the steering wheel it is quite easy to become oblivious to everything else. Before you realize it you are Phil Hill at Le Mans, in the rain, John Surtees in a Ferrari GP car at the 'Ring, Jimmy Clark at the wheel of a Lotus at Monaco. What could be sweeter?



This young lady needed a bit of instruction, which she received from an attentive Tom Thumb helper.

Factory team drivers learn a new technique. The unused hand controller on the counter tells the story!

THE MAN FROM R.E.V.E.L.L.

MEET BOB PAETH — THE MASTER MODELER BEHIND THE REVELL CONTESTS

BY WAYNE WASHBURN

On the day Bob Paeth was born, Gust Thorenquist brought home a sparkling rubber-molded copy of a 1935 Oldsmobile for his brand new grandson. Today, 30 years and 1500 models later, Bob says that his fascination for the tiny scale models began with the '35 Olds, which, incidentally, he still has.

Bob Paeth is research analyst for Revell, Inc., one of the industry's largest hobby manufacturers. Revell models are sold in more than 35 countries around the world. Part of the company's success results from the authenticity and detail the company designs into its models, which is the prime responsibility of a research analyst, a job almost any guy who has ever loved automobiles would want. A second, but equally important job for a model research analyst is designing the custom parts that are included in a Revell customizing kit and overseeing that each line and detail in every car is correct beyond doubt.

Bob's personal collection of cars numbers more than 1500, most of which are collectors' items that have long disappeared from the shelves of hobby shops in the United States. Among them is a scale model of a '49 Dodge released back in the dark ages of model building by a manufacturer even Bob can't remember. He also has a complete series of Revell Highway pioneers that were produced in the early 1950's as the first model cars produced by the company. The collection also includes multiple, untouched kits of AMT's first three-in-one kits. The three-in-one kit was introduced late in 1957 and featured such "exciting customizing parts" as twin fender aerials, one combination spotlight rear view mirror two fender mirrors, a set of tack-on hood louvers and a frantic pair of fender skirts. Wild, isn't it? Hardly the kind of

This 1935 Oldsmobile was the first in Bob's collection. One of very few in existence, it's made of solid rubber and the scale is very good, considering the model itself is 30 years old.



custom kit that would impress today's builder but it started a chain of custom model car kits that is still flourishing today. As a matter of fact, the custom parts weren't much of a custom job even then, so the guy with an eye toward re-benching a fender had to add such groovy innovations as ball point pen fillers for twin exhausts and wooden dowels for spotlights.

One of the most interesting cars in Bob's collection is a huge taxicab that he rescued from Hal Roach studios in 1964. It had been used as a substitute stunt stand-in whenever they didn't want

to push a real one off a cliff or the end of a dock. According to Bob, the car was featured, in several "Our Gang Comedies" and "Laurel and Hardy" movies and is one of two in existence. He values the odd model at somewhere in the vicinity of \$1,000. Harrah's Club, well known for its collection of antique automobiles, and the Hollywood museum have shown great interest in the car. But Bob, like the true collector he is, has refused all offers. If you ask him why he won't sell, he says, "I like it," and that's true of most of his cars.

Bob's professional career as a model





This 1956 Chrysler car kit was a combined effort of Revell and AMT. Later Revell, alone, produced the kit.



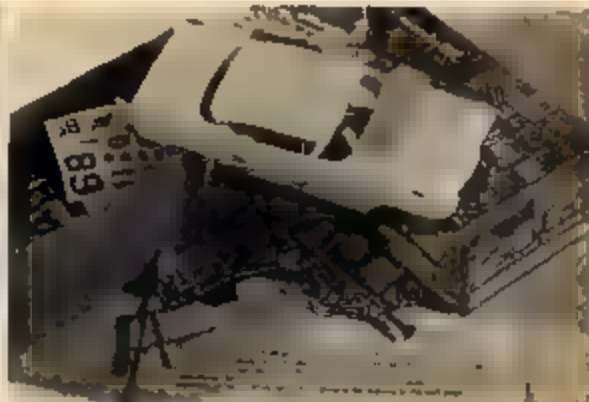
One of the earlier AMT cars is this '51 Pontiac, with metal bumpers and grille and metal chrome trim on the hood and trunk.



This AMT kit includes the '55 Buick, T-Bird and Dodge. This particular kit is one of very few left in existence. These cars could only be built stock as no customizing parts were available.



In 1957 AMT produced the first customizing parts. This '57 Buick had customizing parts and windows but still lacked an interior which, at that time, was considered to be unnecessary for a good looking model.



This '58 Buick is one of the first 3 in 1 kits produced by AMT. While the customizing parts were not the best, they were a step in the right direction.



This futuristic roadster, created from scrap parts was featured in the April, 1964, issue of Model Car Science.



As an experiment in combining many kits, Bob built this "A" using Revell's body, Ala Kart fenders and AMT's Indy front end. Wheels and tires were pirated from a '61 Ranchero.



Although designed for the drag strip, Bob's '57 Chevy has all the requirements for a street machine. Bob limited himself to nothing but Revell parts on this car.

builder began with the 1961 Oakland Roadster show where he displayed 15 of his prized possessions to accent the real automobiles being premiered at the show. The display turned into a contest of more than 60 cars. AMT came to the roadster show with trophies for even the model cars and Bob went home with three trophies and an idea. The next year George Harris judged another contest at the Roadster Show and the entries leaped from 60 cars in 1961 to more than 150 in 1962. This time Bob took two of the prize trophies and became the consultant on Oakland's Hobbymaster TV Show which was also shown in Los

Angeles.

It wasn't long before Revell began showing an interest in Bob and in 1963 the company sponsored the contest at the Oakland Roadster Show. Bob was assigned to judge the more than 250 entries and before he realized what was happening, the head of Revell's Research Department had offered him a job.

When Revell decided to run its huge national model car building contest, it became Bob's job to help to formulate judging rules and regulations. From the first year, the contest brought in more than 5,000 models from all over the country.

Bob's models from his private collection have appeared in model magazines since the first part of 1961 and his latest creations are soon to be seen in Howard Hawk's motion picture production of "Red Line 7000," the dramatic story of stock car racing.

If you've been wondering where your model car building may lead you and if you've got the kind of patience and love for automobiles that keeps you putting models together whenever you get a spare minute, you may find something in the tiny plastic models that will lead you into a future profession you'll enjoy. After all, that's what happened to Bob.

By JIM BAMBRICK

Hot Time in

From Oregon, Washington, Nevada, Arizona and California (Yeah Man!) came the best drivers of the Wild West. 16 of the quickest thumb-benders this young editor has ever seen at any one go-around. The action-happening-scene was San Francisco — the West Coast's answer to New York, Chicago and East Orange, N.J. The action was a run for the big money (\$22,500!) sponsored by Western Model Distributors (known affectionately by us in-guys as W.M.D.).

Run in conjunction with the '66 Imported Car Show, the Western Model

Car Championship was the final rally of umpteen weeks of eliminations held throughout this side of the U.S.A. The Regional winners (and yours truly) were flown to the Big City, with all expenses paid by the Big Hearted Guys at W.M.D. And when we deplaned at SFO (that's air line talk for San Francisco International) there was no doubt that this was where the action was; just about everybody within elbow rubbing room was hauling a hairy looking tool box.

Starting with a Powder-Puff Derby, followed by an eight hour warm-up, the

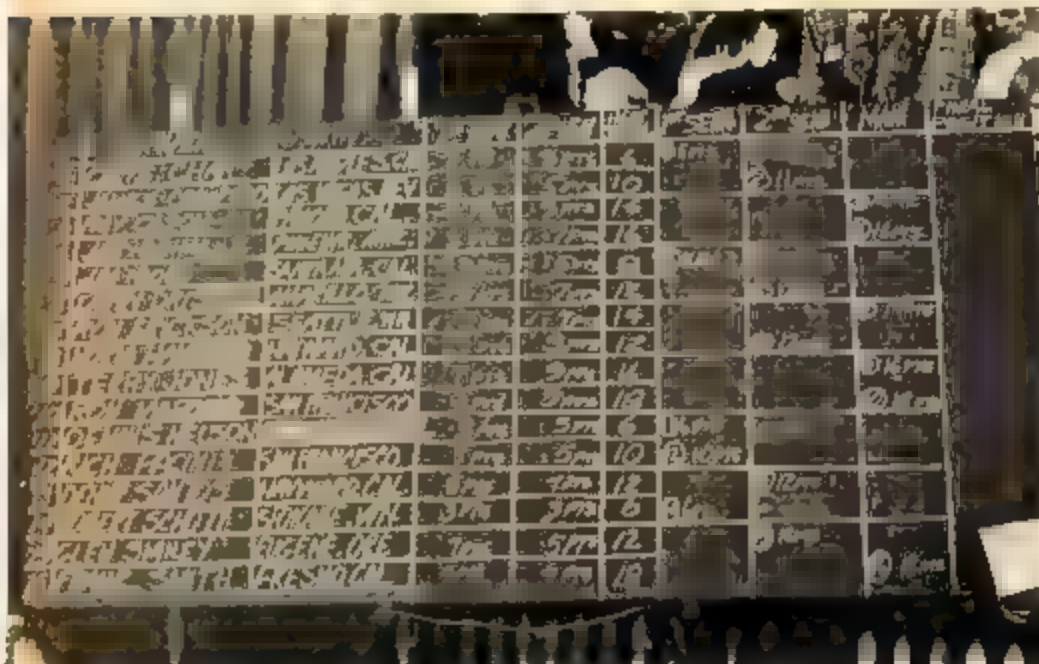
two day Championship event drew crowds that put the big-car show to shame (they were even displaying the original James Bond car — yours for \$45,000). Somewhere close to 18 manufacturers set up their wares to woo the cheering fans. But when the action started to get a little warm, those poor display tables got a hearty workout, with folks climbing up the walls for a better view.

Revell's new and beautiful "Monte Carlo" circuit got the nod for the Championship roadway. No mean midget course, the track was especially designed for the event, with 160 feet per lane and banked turns of 15 and 20 degrees.

As the evening wore on and Sunday morning rolled around, the fans started singling out their favorite thumbs. Leading the pack throughout the hours were: Ray Cason, Pomona, Calif., Joe Dehalle, Phoenix, Ariz.; Terry Jones, Alameda, Calif., Ron Marconi, San Francisco, and Frank Smith, Fresno, Calif. Frank, who had a particularly enthusiastic following, looked like he had the show just about wrapped up. Talking about his chances

Lining up in the Foggy City by the Bay were 16 of the finest drivers this side of the Great Dixie. Joe Dehalle, #4, roared off with first prize when his 1/24 scale Cooper Formula One finished 11 laps ahead of the pack.

Frank Smith, #16, one of the top fan-favorites, came to grief when he was forced to make an engine change in the main event. Joe Dehalle, far right, made a 32 second pit stop midway through, losing four laps, but ended the run 11 laps in the lead.



Fog Hollow

A RUN FOR THE BIG MONEY
IN SAN FRANCISCO



Young, but determined, Sue Openshaw waltzed away with the Powder Puff title at the opening of the show. Presenting the trophy was the James Bond Girl from the Aston-Martin exhibit.



During the long hours, while the finalists worked out the feel of the track and then made a break for the money, members of the Prancing Horse Club, from San Leandro, Calif., kept the crowd clued in on how the action was going.



Was this an over-zealous Turn Marshal? Nope, just a good T.M. trying his best to protect the fans. Coming through the slots, the championship cars were bettering over 280 scale miles per hour and could have given nasty clips to unsuspecting noggins.



Among the news-deaths who came to see what was happening and stayed to watch the action was Gordon Martin, Automotive Editor of the S.F. Chronicle.



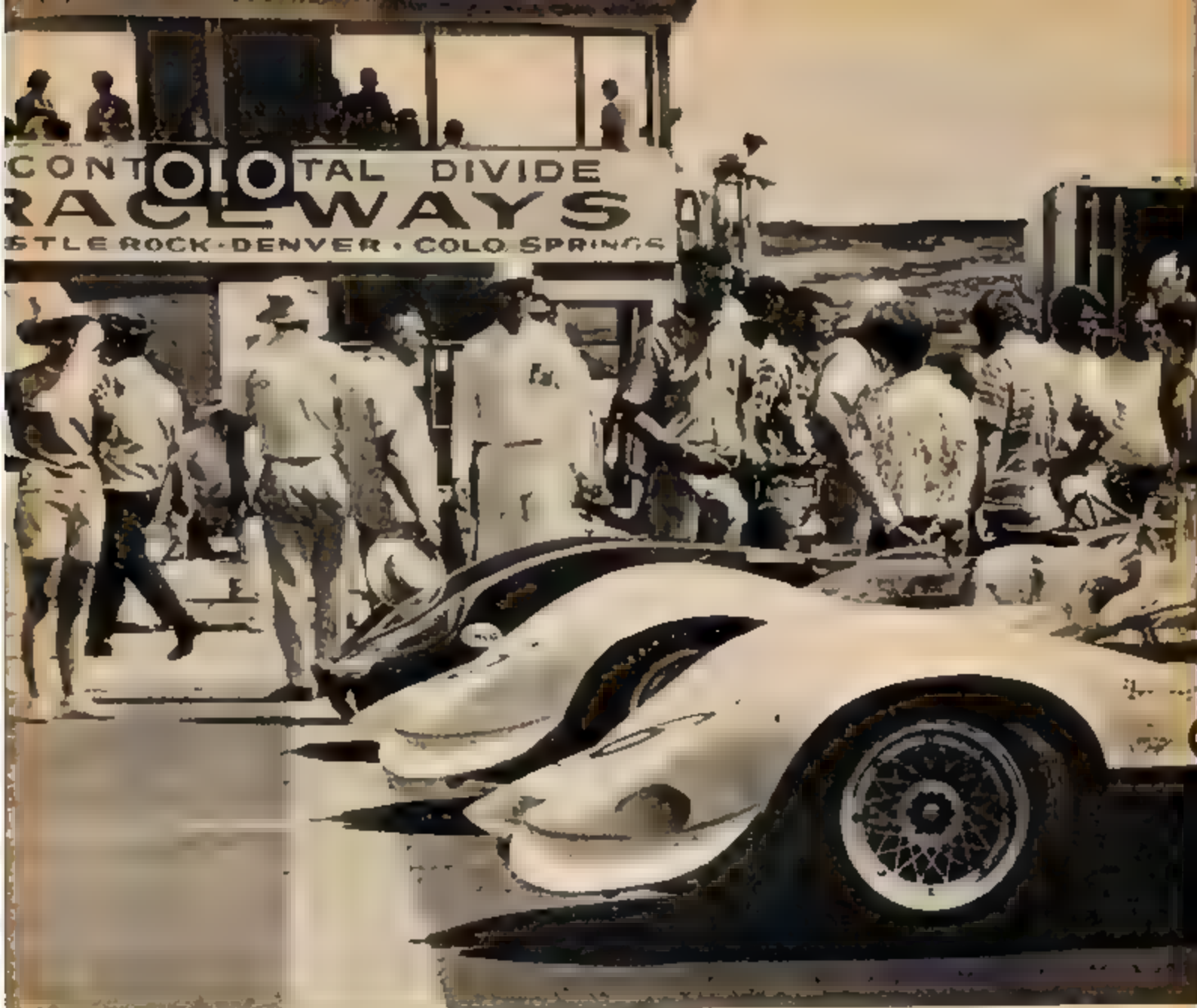
The biggest crowd pleaser of the whole car show, W.M.D.'s championship run kept San Francisco's Brooks Hall packed around the clock. Somewhere behind the people were those poor display tables.

just before the main tussle, he was admirably non-committal. But you couldn't help feeling that he had it knocked; and Mrs. Smith was beginning to worry about the crowds playing around with Triumph Spitfire going as first prize.

But Old Lady Luck played it nasty. Frank's car took a wicked nerf near the end of the last event and went up and over the edge. Frank made a brave try to get back in the action, but 'twas too late. Joe Dehalle, the Pride of Phoenix, Arizona, was home ahead of the pack by over 11 laps. Although it's never particularly thrilling to lose, all the drivers gave Joe a wild congrats for a race beautifully run.

It was a great weekend for the slot

racing world, thanks to a whole host of people. We hereby extend MCS Good Guy Awards to the Mayor of San Francisco who provided two days of great weather (unfortunately, the show was held in an underground parking lot), to all the supporting manufacturers and the folks from W.M.D. (particularly Jim Archibald, who was sort of a one-man task force keeping the action moving); and especially to the 16 Western Champs who fought so hard and so sportingly. Watching those guys go the distance, this fan couldn't help thinking that Slot Racing is no longer just a hobby; it's got all the classic competition of any of the Olympic sports and someday it's going to make it really big.



CHAPARRAL!

MOST REALISM FOR THE MONEY

When Jim Hall, that "Top Track Man" from Midland, Texas, named his brand new sports-racing car "Chaparral," racing buffs didn't take much notice. It had an unorthodox shape and came from an unknown place. But when the car began to rack up victory after victory, folks sat up and began to take notice. With Jim Hall at the wheel, it won the first USRRC race ever run at Daytona in 1963. The odd shaped white car then went on to finish second in Laguna Seca. With teething troubles ironed out it came back stronger than ever in 1964. It won at Daytona again, then swept Laguna Seca and Watkins Glen. A couple more second places and a first in Meadow-

By **GEORGE SIPOSS**

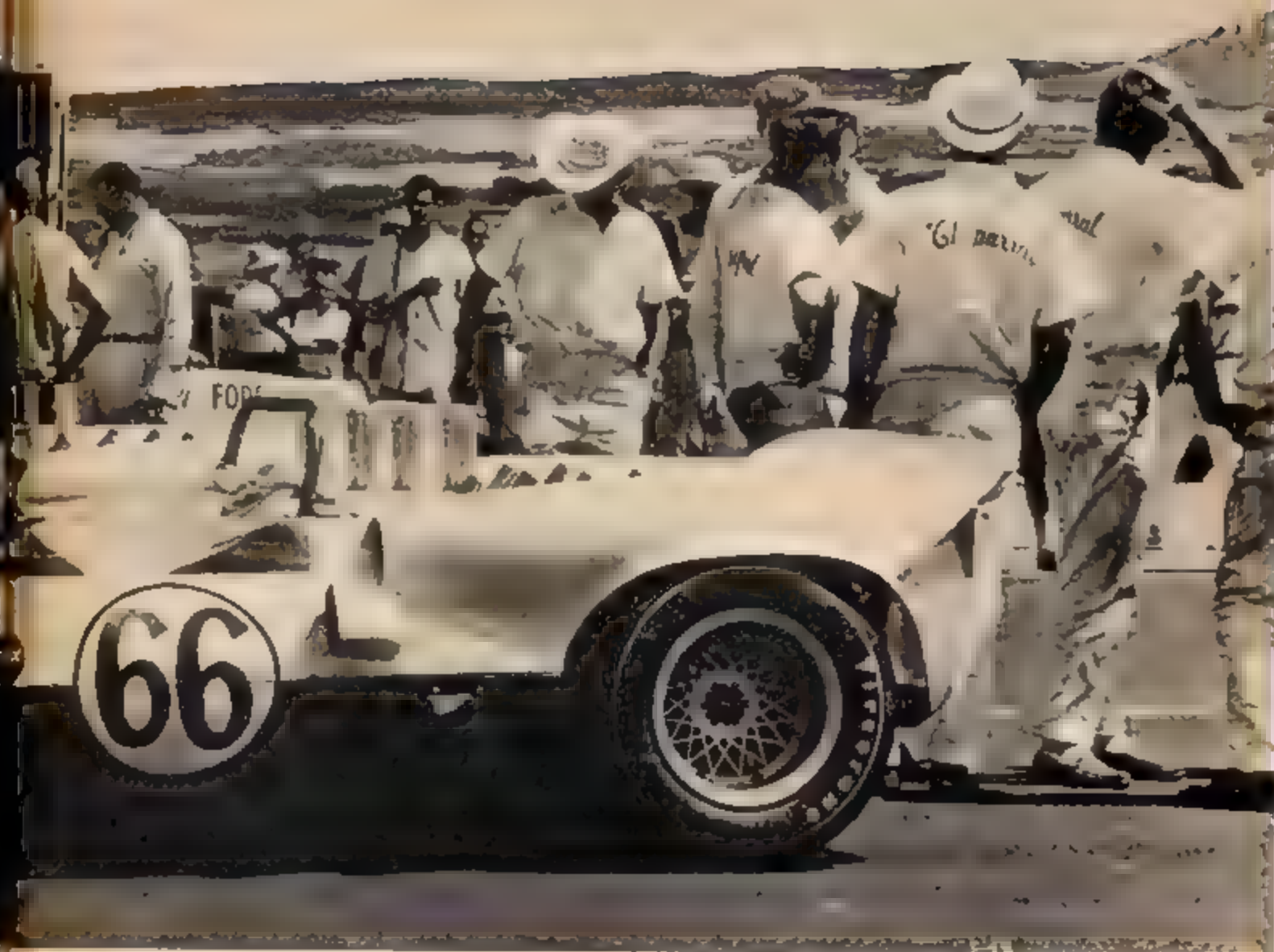
dale clinched the 1964 U.S. Road Racing Championship for Jim Hall. Jim and his co-driver Hap Sharp win these days with monotonous regularity. In 1965 the Chaparral showed the way to the finish line as it was victorious again in Sebring, Riverside, Laguna Seca and Watkins Glen.

This gaudy looking car sports a 327 Corvette engine and a supersecret automatic transmission. The transmission is the object of much discussion since its exact construction is not known, although Chevrolet parts are said to be its main components. While sports car drivers

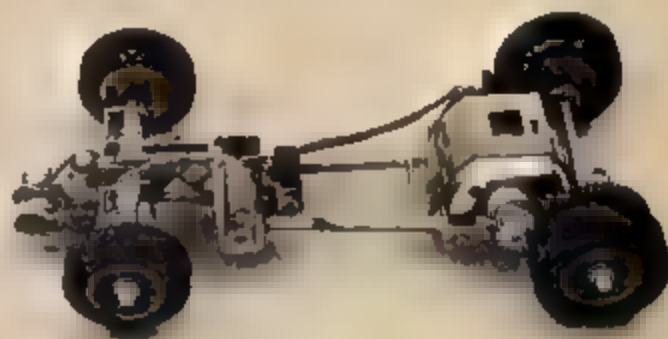
pride themselves in being adept at "slirring" the gearshift lever to keep the engine in the useful torque-horsepower range, Jim Hall's philosophy is that the driver should devote his full attention to racing and keep both hands on the steering wheel. Looking at his racing record who can argue with that? And who can argue with Cox, the successful California manufacturer of slot cars, for producing an exact replica of the Chaparral. For looks it's unbeatable. For "GO" they used sophisticated components and the results are stunningly successful. This car, we predict, will revolutionize the thinking of many a slot car buff and

Continued on page 54

MODEL CAR SCIENCE



What you have here is just about the best looking racin' machine that ever terrorized a track scene. It's got more realism than you can buy elsewhere for twice the price.



The workings that keep it up front and out of the pits are supported by the now famous Cox magnesium chassis. Other Go-Goodies include self-lubricating gears and a spring pressured pick-up arm.



Tired of those out-of-scale, head-only drivers you find in most cars. Well, then, give your paint brush a real work-out with this perfect 1/24 scale Jim Hall.

manufacturer. Why? Read on and see.

The 1/24 scale Cox-built Chaparral comes to you in a beautiful box with all the components in transparent plastic bubbles for easy identification and protection against shipping damage. Spending a few minutes with the instruction sheet always proves beneficial, so we did just that. Then the parts were carefully spread out on the table and construction began.

First the body was assembled so that it could be left to dry while the chassis was worked on. The body is very easy to work up since the main section is in one piece. The detail is perfect right down to the Dzus fasteners and rivet heads.

The body is ultra easy to work up, with the main section in one piece. And the detail is perfect right down to the Dzus fasteners and rivet heads.

That bobtail in back is what most cars see while they're doing their darndest to catch up. And on the "rubber front" there're the softest non-sponges that ever stuck to the track.

in the back and cooling vent in the front. No need to cut anything; it's all pre-finished. The headlights nest very nicely behind transparent fairings and we couldn't help thinking about slipping in a pair of grain-of-wheat bulbs for the next Enduro race. Only minimum cementing is necessary to fit the lower front panel. The nicest touch is the full cockpit with the regulation passenger seat and full instrumentation. Instead of the upper-torso-of-driver which we almost began to get used to lately, we found a full length driver. This alone cannot be beat for realism. Jim Hall Miniature holds the steering wheel in "his" hands and keeps his eyes, in a very determined fashion, on the road ahead. One would almost expect him

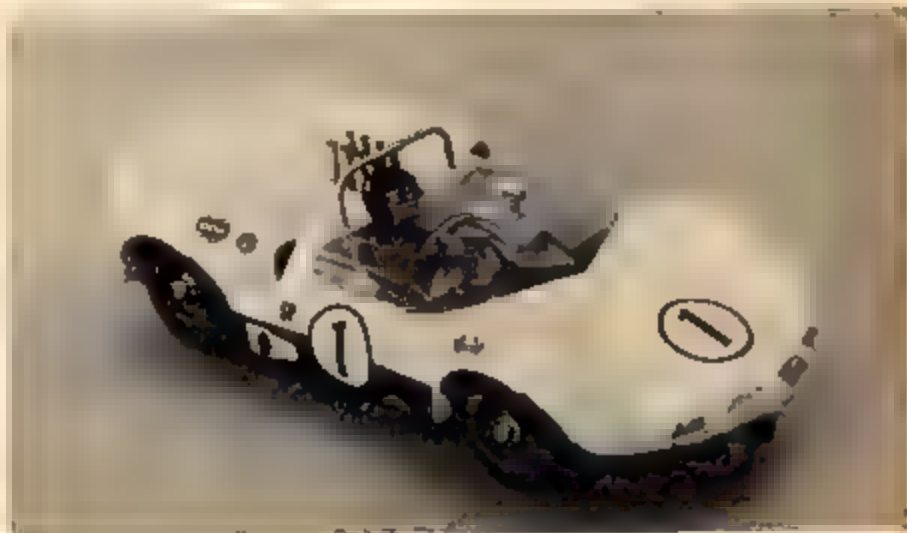
to stand up and stretch after a good fast run. The cockpit and driver details were painted carefully and the assembly was put away to dry thoroughly.

Now we begin assembly operations on the running gear. Here we found the now famous Cox magnesium chassis arranged neatly to tie in the running gear while keeping weight to a minimum. The gear on the axle is made of Nylon-6, a self lubricating plastic, and are the rear journals, and no epoxy is required to fix them in place.

The pickup is mounted on a drop arm which is a necessity with high torque sidewinder motors. A small coil spring holds the pickup arm to the track. If you hold the chassis upside down you'll have no trouble assembling the spring, arm and bushing. The pickup flag itself is of highly advanced design having a bead on the bottom to produce maximum slot holding power.

Adherence to detail is carried through the whole car. Even the front axle is

Continued on page 56



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carried gracefully with a simulated A-arm "wishbone" type independent suspension system. The axles have tapered sections to ensure concentricity to the n-th degree. Very realistic wheel hubs and locknuts complete the hardware department. On the "rubber front" we found the softest, gummiest tires of a special composition though they were not "spongy." The sidewall detail is terrific and track adhesion is faultless.

The main assembly completed, we let the motor run without load for a few minutes before road testing. The two body mounting screws held body and chassis together in true Chaparral monocoque fashion. How about that for sticking to realistic detail?

Another pleasant few minutes later the decals were applied and the car was ready for a test spin. At first glance it seemed too bad that the driver's left hand didn't grip a gearshift lever, but we soon realized that we were dealing with an automatic and not "four on the floor."

Driving it? What can one say when the car takes off like a scared cat, corners like on rails, sticks to the track like chewing gum on the floor, and looks like its driver is doing it all from that 1/24 scale cockpit. A drop of oil here and there, sand the outer rim of the tires and adjust the pickup braid... the rest is sheer pleasure. Drive it; you'll like it. Oh yes, what does Chaparral* mean? Look it up in the dictionary yourself... you'll find it a most fitting name. *Chaparral bird — Roadrunner. (Webster's.)



And here's the real Jim Hall who started it all. Come on, Jimbo, smile; you and Mr. Cox have both got a good winner going.

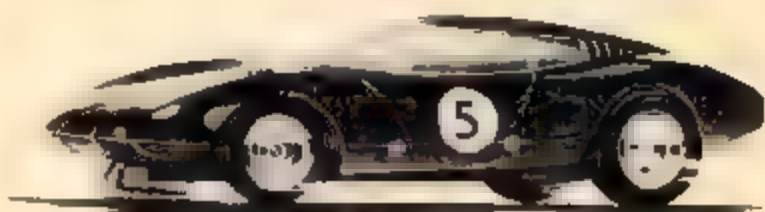
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CUSTOMIZE THAT Lap Counter

... or how to flick your wrist for better HO

By GEORGE SIPOSS

You are only 35 cents away from faster, better and more exciting HO races. The old bugaboo of "Your track line is faster than mine" need no longer dampen your enthusiasm. These simple steps will show you a method whereby your races will simulate the real thing so much that your track will be the talk of the town.

No matter how carefully your track is planned, even if you have a figure of eight type layout, one of the lanes always seems to have an edge on the other. What to do? Simply run the cars on their lanes for a few minutes,

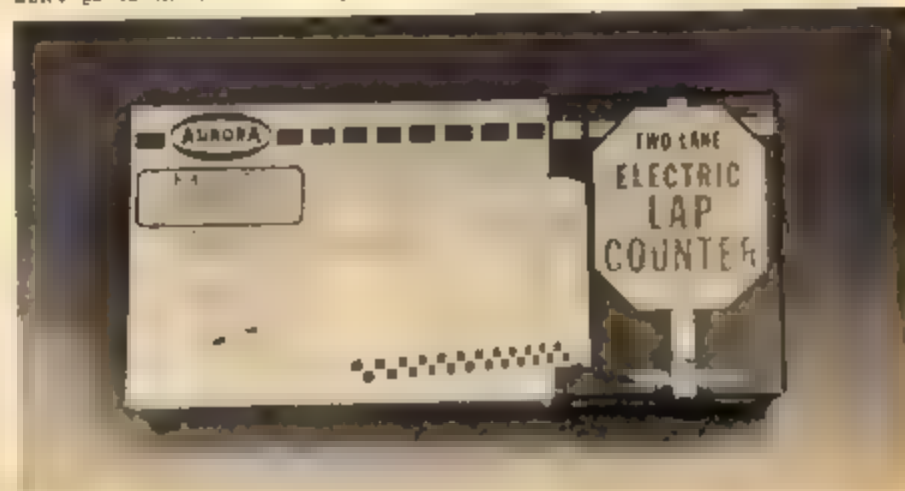
then switch them. Now each car and driver will have a chance to drive on each lane for an equal number of times. OK . . . but what about keeping score of the completed laps?

Well, a lap counter is a must. Mechanical lap counters work nicely but they don't go to more than 20 laps at the

most. Aurora's electric lap counter indicates laps up to 99. There is only one problem now. When you change lanes, racing has to stop for a minute while the laps are recorded and the counters reset. Meanwhile the cars are cooling down and your racing blood does too.

Continued on page 60

Aurora's two lane electric lap counter makes racing a pleasure by settling arguments on "who covered more laps."



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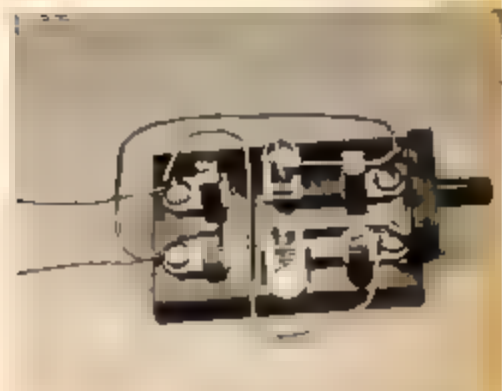
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A small screwdriver and scissors are used to add the lap counter to your track.



Connect two wires from your track section to the end screws of the switch. Connect the opposite corners of the switch also.



With this simple device you merely connect the lane you are racing on with "your" side of the counter. In other words, regardless whichever lane you are using, one of the counters will always add up the laps completed by your car, while the other side of the counter does the same for your opponents. You simply run on one of the tracks, for say, five minutes, switch to the other track and continue racing. Your counter will follow you faithfully.

Here is what you do to create this magic. Go to the nearest radio supply store and buy a simple D.P.D.T Reversing Switch (often called TV antenna

grounding knife switch, or double-throw-double-pole) for a few pennies. I bought mine for 35 cents. Using some of the wires which come in the Aurora lap counter kit, connect the opposite corners of the switch. Make sure that the insulation is removed at the points where the screwheads hold the wires. Connect two end screws to the track section which is used for lap counting and, connect the two center screws to the two outside screws on the back of the lap counter itself. The center screw of the lap counter is connected to the power supply, as shown on the Aurora wiring diagram.

This is all there is to it. The switch

can be hidden behind a house or bush on your track and at the flip of your wrist it will follow your car whichever lane it may be on. A simple kitchen timer can be used to keep time for the driving periods. The race is only stopped for a few seconds and no time is lost with recording laps or resetting the counters. At the end of the race you simply read off the completed laps on your side of the counter.

It is a good idea to mark your car with colored tape, a letter or a number. A corresponding indicator should be put on the lap counter as well, so that you can tell your score at a glance.



From the center screws of the switch run two wires to the lap counter. The middle screw on the lap counter is connected to the power supply of the track.



The wiring is shown here completed. The switch is between the lap counter and the striped track section. Aurora's electric counter sells for \$9.95.

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THE ULTIMATE LOLA

It may not be an absolute screamer, but it's built to hold its own and last forever.

BY JIM FARRELL
AND V. E. SORENSEN

Is it really possible to build a perfect slot car? The unfortunate answer, after multitudinous hours of brain-straining investigation, is an uncompromising NO! The whole problem revolves around just what it is that most people would call perfect. Each and every builder has his own idea on the subject, you and I included.

However, if you take a survey of what most people like, item by item, characteristic by characteristic, and average them out — you CAN put together the nearly perfect car. And that's what we've done here. Now some fans may cry TILT, but according to our tests our Ultimate Lola is the personification of sheer perfection (and the ghoulish metal-flake finish even adds a certain sartorial splendor!). It may not beat your scratch built terror, but it can hold its own in a hot "dice." It goes, is a snap to handle, and can be seen from a country mile. So, if we've sparked your interest, just follow the bouncing ball as bop through the photos.

Continued on page 64



The wide and low lines of Lancer's Lola 70 body took a number of votes in our survey. To move it, we chose the C&S Fury Mark I. It's built for a long and rugged life. To hold our Lola together, we used Car Vic's #1000 Chassis kit. It gives you everything in one easy to work with package.



Car Vic's man-size frame goes together in a trice, with just a twist or two. For added zap, we added ball bearings on the rear axle.



After positioning the front wheels so that they fit the wells on the body, select the proper spacers from those provided in the kit. Lock into place with the jam nuts also provided.

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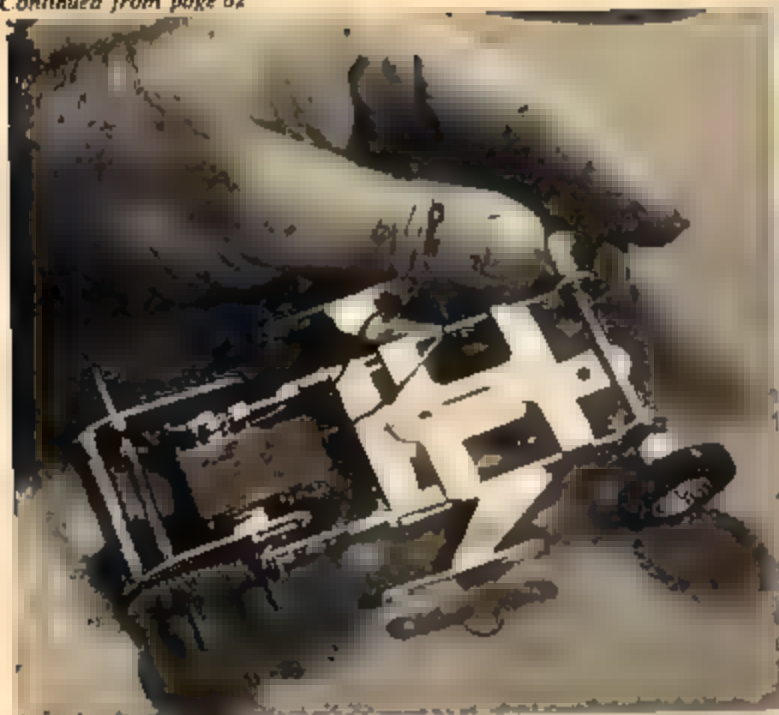
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John Geintzwein, of Woodland Hills, Calif., added a wildnik metalflake finish. So maybe it's not authentic. But you can see it coming through the curves a country mile away.

TABLE TOP RACING SECTION



PHOTO CONTEST

Each month Model Car Science will award valuable prizes to the readers who submit the best photos of slot racers in action. Send your photos to: Table Top Photo Contest Model Car Science, 171 Barrington Pl., Los Angeles 49, Calif.

THIS MONTH'S
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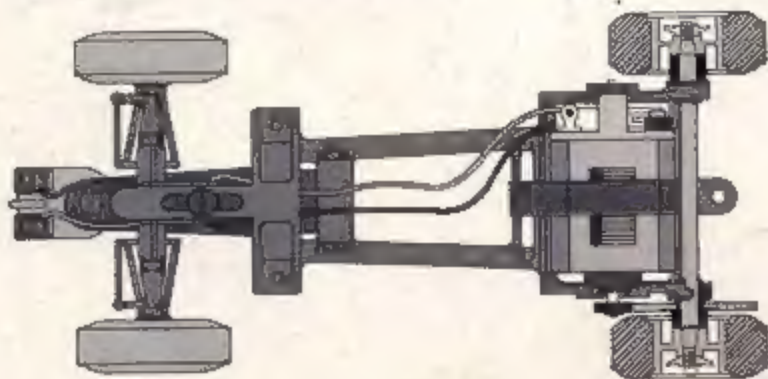
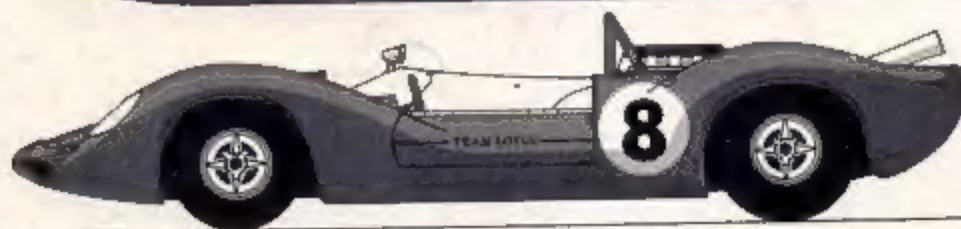
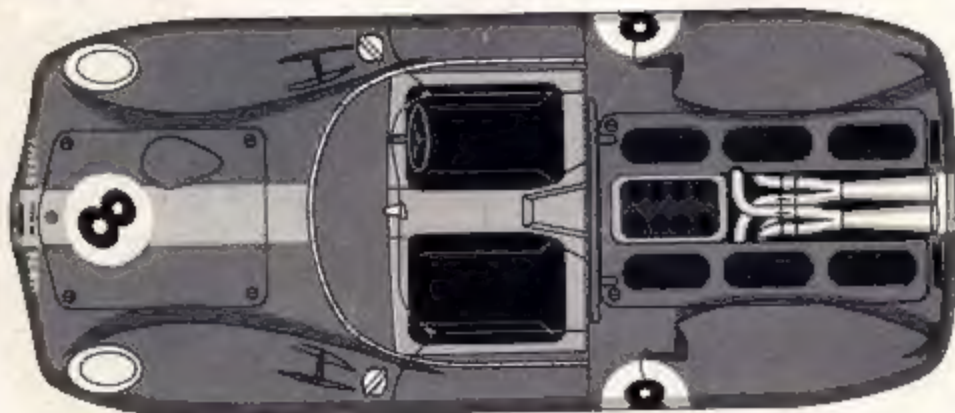
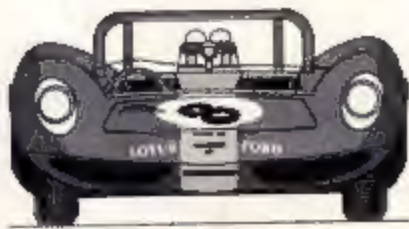
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